

Supplementary Materials

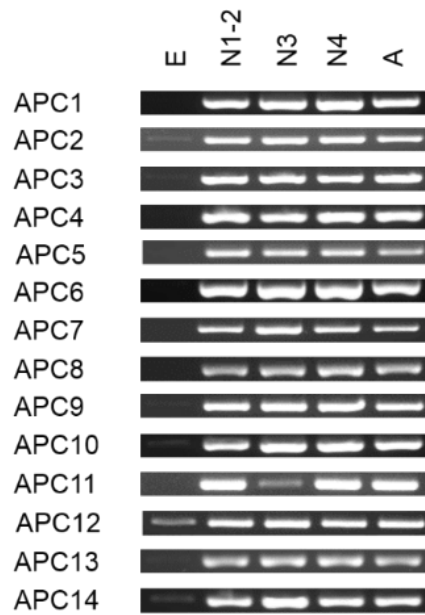


Figure S1. Amplification of 400 to 600-bp APC transporter gene fragments across different developmental stages of *B. tabaci*. E, Egg; N1-2, 1st- and 2nd-instar nymphs; N3, 3rd-instar nymph; N4, 4th-instar nymph; A, Adult.

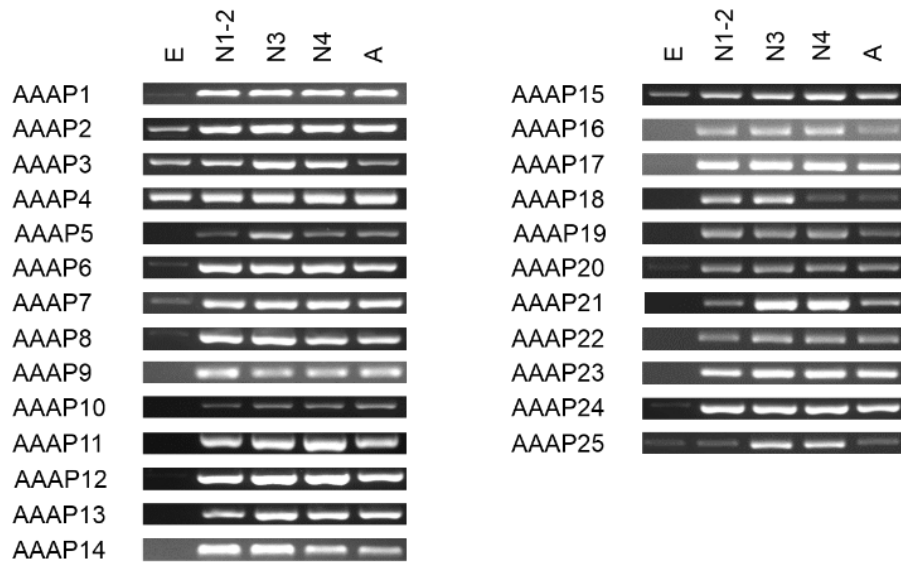


Figure S2. Amplification of 400 to 600-bp AAAP transporter gene fragments across different developmental stages of *B. tabaci*. E, Egg; N1-2, 1st- and 2nd-instar nymphs; N3, 3rd-instar nymph; N4, 4th-instar nymph; A, Adult.

Table S1. Identification of APC and AAAP genes in the *B. tabaci* B genome. The APC and AAAP sequences were obtained from the *B. tabaci* B genomic sequences and transcriptome databases, which were confirmed using the tBLASTX algorithm with a cut-off E-value of 10^{-70} . Transmembrane (TM) helices were predicted by TOPCONS software, available at (<http://topcons.cbr.su.se/>). *A. pisum*, *Acyrtosiphon pisum*; *A. cephalotes*, *Atta cephalotes*; *B. impatiens*, *Bombus impatiens*; *C. lectularius*, *Cimex lectularius*; *C. quinquefasciatus*, *Culex quinquefasciatus*; *D. noxia*, *Diuraphis noxia*; *H. halys*, *Halyomorpha halys*; *H. saltator*, *Harpegnathos saltator*; *S. invicta*, *Solenopsis invicta*; *Z. nevadensis*, *Zootermopsis nevadensis*.

Gene	Scaffold	Start	End	AA	Orientation	Exon	TM	Blast hit	Species	Identity	E-value	Coverage
<i>BtAPC1</i>	41	528365	647266	501	-	12	12	XP_014252466.1	<i>C. lectularius</i>	79%	0	96%
<i>BtAPC2</i>	55	565993	579717	486	-	11	12	XP_014286061.1	<i>H. halys</i>	72%	0	97%
<i>BtAPC3</i>	60	783377	791483	611	+	13	14	XP_015370694.1	<i>D. noxia</i>	50%	0	95%
<i>BtAPC4</i>	125	130357	185697	566	+	13	14	XP_014285984.1	<i>H. halys</i>	81%	0	85%
<i>BtAPC5</i>	183	396498	506465	792	-	13	14	KDR22125.1	<i>Z. nevadensis</i>	69%	0	98%
<i>BtAPC6</i>	538	30268	49049	500	+	9	12	XP_003485650.1	<i>B. impatiens</i>	70%	0	92%
<i>BtAPC7</i>	963	120329	135338	619	+	11	12	XP_001943940.1	<i>A. pisum</i>	58%	0	79%
<i>BtAPC8</i>	999	46729	64738	646	-	9	14	XP_014242275.1	<i>C. lectularius</i>	72%	0	98%
<i>BtAPC9</i>	1270	72989	89703	614	-	13	14	XP_011168673.1	<i>S. invicta</i>	54%	3E-168	96%
<i>BtAPC10</i>	1270	140120	158567	616	+	13	14	XP_012061678.1	<i>A. cephalotes</i>	55%	0	94%
<i>BtAPC11</i>	1561	17206	33426	580	-	11	12	XP_001943940.1	<i>A. pisum</i>	58%	0	84%
<i>BtAPC12</i>	1576	24441	65931	505	+	7	12	KDR11465.1	<i>Z. nevadensis</i>	72%	0	89%
<i>BtAPC13</i>	1338	1409	13834	614	+	13	14	KYM76403.1	<i>A. cephalotes</i>	52%	0	94%

<i>BtAPC14</i>	1362	3242	19197	545	-	9	12	KDR11465.1	<i>Z. nevadensis</i>	63%	0	92%
<i>BtAAAP1</i>	5	2961754	2980974	442	+	8	11	XP_014241281.1	<i>C. lectularius</i>	48%	6E-122	93%
<i>BtAAAP2</i>	5	4266371	4279305	512	+	7	10	XP_014279898.1	<i>H. halys</i>	69%	0	93%
<i>BtAAAP3</i>	10	2278493	2301442	508	-	7	10	XP_001845151.1	<i>C. quinquefasciatus</i>	57%	8E-173	92%
<i>BtAAAP4</i>	14	3533839	3552224	463	+	9	11	XP_001945852.2	<i>A. pisum</i>	68%	0	95%
<i>BtAAAP5</i>	35	665239	677586	1081	+	10	11	XP_011154879.1	<i>H. saltator</i>	60%	1E-145	36%
<i>BtAAAP6</i>	68	953386	999307	469	+	9	10	XP_014272142.1	<i>H. halys</i>	63%	0	98%
<i>BtAAAP7</i>	160	321083	337031	463	+	8	11	KDR07697.1	<i>Z. nevadensis</i>	59%	3E-161	91%
<i>BtAAAP8</i>	202	138739	171255	455	+	9	11	XP_014285965.1	<i>H. halys</i>	66%	0	98%
<i>BtAAAP9</i>	202	342918	360434	561	+	13	11	XP_015363508.1	<i>D. noxia</i>	47%	5E-155	97%
<i>BtAAAP10</i>	234	152950	165220	454	-	9	11	XP_014241281.1	<i>C. lectularius</i>	44%	7E-128	99%
<i>BtAAAP11</i>	381	90753	125197	546	+	10	11	XP_014285817.1	<i>H. halys</i>	70%	0	87%
<i>BtAAAP12</i>	534	215882	224573	497	+	8	11	XP_014293635.1	<i>H. halys</i>	48%	3E-142	97%
<i>BtAAAP13</i>	566	23146	32010	467	-	9	11	XP_014278668.1	<i>H. halys</i>	54%	1E-153	89%
<i>BtAAAP14</i>	566	56724	65756	455	-	8	10	XP_014278669.1	<i>H. halys</i>	48%	2E-129	97%
<i>BtAAAP15</i>	566	69972	81014	459	-	8	10	XP_008189238.1	<i>A. pisum</i>	56%	1E-141	81%
<i>BtAAAP16</i>	566	94730	105206	450	-	8	11	XP_008189238.1	<i>A. pisum</i>	40%	4E-103	96%
<i>BtAAAP17</i>	566	115437	123160	442	-	9	11	XP_015369666.1	<i>D. noxia</i>	41%	1E-80	85%
<i>BtAAAP18</i>	566	126339	140007	470	-	9	11	XP_014278669.1	<i>H. halys</i>	39%	3E-117	98%
<i>BtAAAP19</i>	566	141985	154513	459	-	8	11	XP_014278669.1	<i>H. halys</i>	41%	6E-115	98%
<i>BtAAAP20</i>	566	156752	165127	450	-	8	11	XP_008189238.1	<i>A. pisum</i>	39%	2E-106	96%

<i>BtAAAP21</i>	566	170666	190146	497	-	10	10	XP_014278668.1	<i>H. halys</i>	57%	0	95%
<i>BtAAAP22</i>	873	31197	41895	557	+	9	11	XP_014239846.1	<i>C. lectularius</i>	45%	3E-147	95%
<i>BtAAAP23</i>	1219	64767	70325	535	-	2	11	XP_015363705.1	<i>D. noxia</i>	73%	0	99%
<i>BtAAAP24</i>	1576	117215	131298	463	+	6	11	XP_014278669.1	<i>H. halys</i>	44%	6E-121	89%
<i>BtAAAP25</i>	1810	3231	14171	557	-	9	11	XP_014239846.1	<i>C. lectularius</i>	45%	4E-147	94%

Table S2. Primers used for studying AATs.

Purpose	Primer Name	Sequence (5'-3')	Size (bp)	T _m (°C)
Gene fragment clone	APC1-F	TGACAACACCACAACGGAAGT	454	58.4
	APC1-R	GGACAGGAACGCAATACAAAG		57.5
	APC2-F	GGTGGTGACTACGCCTACA	494	53.6
	APC2-R	ATTGCCCTTGGGAGATTTA		54.7
	APC3-F	ATGCCTATGTAACGGTTGG	554	53.3
	APC3-R	GCAAATTATTGTCAGGGAAA		53.1
	APC4-F	GGACGATGAACCCGAGCAA	446	61.3
	APC4-R	CCAACCATCATA CGCCAC		59
	APC5-F	TCCGTT CACGCTGGTTCAA	567	60.4
	APC5-R	GCTCAGAGGCGGCTTCATT		60.2
	APC6-F	CCATCCAGCAACGCTATCA	431	57.5
	APC6-R	ACAGTGACCAGCGGCAGAG		58.9
	APC7-F	TTAGCGTGCAATTTGGAGT	535	54.2
	APC7-R	TCATTAAGCTGGGCTGTCT		52.9
	APC8-F	GGTGAACCTGAGCGTGATG	473	56.4

APC8-R	CAAGGAAGGCGAAGATGAGT		56.8
APC9-F	ACATCTTCACGACCGTAAACT	504	54
APC9-R	CATCTGATGACATGGCGTAT		53.6
APC10-F	TTGCCGCTCTTTGTTATGC	406	57.3
APC10-R	GAAGGCTTGCGACTGTTA		56.2
APC11-F	ATTCGCCAGTTTCCTCGTC	451	57.3
APC11-R	GTCACAGCAAGGCTCATCG		56.8
APC12-F	CACTGGTGCTCAAGAGGGA	408	56.1
APC12-R	GATTTCAATGCGAATGGTTT		55.3
APC13-F	GAATCGGGTCAACTCTTGG	521	54.8
APC13-R	GGAAGGCTTGGCTACTGTTA		54.9
APC14-F	GGGATTACAACCCAGCCAACA	522	62.1
APC14-R	GAGCACCAGTGACAAACAGACG		60.5
AAAP1-F	ACGATCTTCCACCTCTTTC	456	50.9
AAAP1-R	CAACAATAGCTGTGCCAAC		51.8
AAAP2-F	AGACGCTGCTCAAGACAAC	415	53
AAAP2-R	GCCAAAGACTAGGGCTAAAA		54.6

AAAP3-F	GGCATCCATCCTGACAACT	581	54.8
AAAP3-R	TACTCACAGCACCGACCAA		54.9
AAAP4-F	GCAGGTCGCTGACGAGTTA	517	56.8
AAAP4-R	TGCTTGAAGGGCGTATGTT		56.5
AAAP5-F	TGAAAGCAACACGGAAAGA	586	54.7
AAAP5-R	TCAGCCAGAGTCAGCACAT		53.7
AAAP6-F	AAACGGGACCAACCAAGTA	525	55.2
AAAP6-R	AATATCCGAAGAAGCCAACA		55
AAAP7-F	GACGGTCTGAACCTGGAAA	514	55.2
AAAP7-R	CGAAAGTTGTAAGGGTGATGG		57.4
AAAP8-F	ATGATGTTGGCGTTCGTAG	575	54
AAAP8-R	AAGTGCGTTATCTTGTCCC		52.3
AAAP9-F	GATGAGGCACAACAAGGAT	420	52.3
AAAP9-R	GGGAGTGTAAGACGCAGA		53
AAAP10-F	GGTCTTGCCAGGAGATTTG	523	55
AAAP10-R	TGCTACCTTGACCTCGTCA		53.8
AAAP11-F	TGCTGGTTGGAATTGGGATA	464	58.7

AAAP11-R	TTCGGCAGTCTTTGGCTTG		59.5
AAAP12-F	AAATGGTGGAAATGGCTGAG	472	57.4
AAAP12-R	GCTGGTAACGAGTGGTGGC		58.5
AAAP13-F	AAATGCTTGTGCGGTCAGA	407	57.1
AAAP13-R	GGAGAAACTCGGCAAATCG		58
AAAP14-F	ATACTTGGCACCAGTGTCTT	571	51.8
AAAP14-R	GAACAACCTCCAGGTTAGGG		51.6
AAAP15-F	AATGCTGCGTGGTTTATGT	430	53.8
AAAP15-R	CTCCAAATCTGCTGGTGAA		53.7
AAAP16-F	CTGTGCTCAGCGTTCATCT	431	53.8
AAAP16-R	TTCCGTCCTTCAGTCGTG		56.4
AAAP17-F	ATCCTGAAGTAGCCGAAGC	409	54.4
AAAP17-R	TCCAGTGCGAACAATGTAG		52
AAAP18-F	CGGTGTTGTAAATGTAGCG	420	52.4
AAAP18-R	TTCCAGAATGTGAGGGTGT		52.5
AAAP19-F	ATGAACTATGTAGACGGAAACG	592	54.3
AAAP19-R	GCCAGATAACCGAAGAAGC		54.9

AAAP20-F	GGAGGCGGCATTTGAGTTA	496	58.5
AAAP20-R	TGGGATCGTTGCTGCGTTA		60.6
AAAP21-F	AGCGGAAGGAAGCATAACT	466	54.3
AAAP21-R	GCTGAGAAAGAACTCGTGGTA		54.7
AAAP22-F	GCCGCACATCTTGCTCTAC	430	56.4
AAAP22-R	GTTTGTACCAACCCGAAA		56.2
AAAP23-F	GCAGCAGGTCATCACCAACA	445	59.7
AAAP23-R	CGAGCCGGAGTCGTAAATC		58.1
AAAP24-F	CGACCATAGGTACGGAACG	423	56.2
AAAP24-R	GTGATGCTGCTTTGGGTGA		57.1
AAAP25-F	CCGCACATCTTGCTCTAC	426	51.4
AAAP25-R	GGTCACCAACCCGAAA		51.2

qPCR analysis

qAPC3F	TCATAGGAGTTGGAAGTCTGGAAGC	108	63.2
qAPC3R	CTGTGACACCATACGGAAAGAAACC		64
qAPC6F	TGGGTGGCGTTGATGGTGATAC	139	65
qAPC6R	AGACA ACTACGGCAGCGATGAG		62
qAPC12F	CAACTGTCTTAGCGTGCGATGG	116	63.2

qAPC12R	TGTTACCGAGCAGGATGTGACC		62.2
qAAAP2F	CTACTGGGACCCGTTCAAGGAG	161	62.6
qAAAP2R	CGATGATGGTGGCGAAGATGC		64.8
qAAAP7F	GAACTGATCGGAATTGGTCTGGTC	91	63.8
qAAAP7R	AAGGCTTGGTGAAGGAGTCTGG		62.3
qAAAP10F	GGTCTTATCGGCACGGCAATG	161	65
qAAAP10R	TTGGCAGCGGGTAGGTTTCC		64.6
qAAAP11F	TGCTGGTTGGAATTGGGATA	94	58.7
qAAAP11R	AAGGATGAGAAGTGCTGGTGT		56.1
qAAAP13F	GCTGGGCATTATAGGCACTCTTG	165	59.3
qAAAP13R	GGTCTAAATGTCTTGGGTCCTTCTG		59.1
qAAAP14F	TTCTCACTGACCTGCCAAGC	156	58.4
qAAAP14R	ACCCGCGAAACTGTGCTG		59.9
qAAAP17F	TCTTTGCCTCTTGGGACCCTTAG	164	59.5
qAAAP17R	CGGACGCCTTTCTGTGTTTCG		59
qAAAP18F	CTCCCTTCGGTGTTGTAAATGTAGC	130	59.9
qAAAP18R	CCAGTCTGCGGTAGATTCAATGTG		59.6

	qAAAP24F	TCCCTGCCCTGGGTATCTT	165	59.1
	qAAAP24R	CGATCTCGTAAACGGTGGTG		58.8
dsRNA synthesis ^a	dsAAAP15-F	T7-AAAATGCTGCGTGGTTTATGT	434	
	dsAAAP15-R	T7-GACTCCAAATCTGCTGGTGAA		
	dsAAAP21-F	T7-ATCCCGCACATTTACAAACGACA	380	
	dsAAAP21-R	T7-GCCGCAATCCATCCATTCCACAT		
	dsEGFP-F	T7-CCACAAGTTCAGCGTGTCCG	469	
	dsEGFP-R	T7-AAGTTCACCTTGATGCCGTTTC		

^a Forward and reverse primers used to synthesize dsRNA template with a T7 RNA polymerase promoter sequence (5'-TAATACGACTCACTATAGGGAGA-3') appended to their 5'ends.

Table S3. FPKM values of the APC transporter genes of *B. tabaci* B at different developmental stages obtained from the transcriptome data. Note: E, Egg; N1-2, 1st- and 2nd-instar nymphs; N3, 3rd-instar nymph; N4, 4th-instar nymph; M, Male; F, Female.

Gene	E	N1-2	N3	N4	M	F
<i>BtAPC1</i>	0.504086	2.467177	4.721837	1.11845	0.596027	0.874986
<i>BtAPC2</i>	2.611293	2.940217	4.071933	1.996583	4.251477	0.481615
<i>BtAPC3</i>	2.044453	5.93996	2.583997	2.3714	4.487063	1.727113
<i>BtAPC4</i>	2.381347	13.96093	11.30084	11.19374	7.231903	18.99333
<i>BtAPC5</i>	0.223266	0.791615	1.080903	1.007421	0.289564	0.407779
<i>BtAPC6</i>	0.767753	17.21833	7.496543	7.006953	11.9449	4.766767
<i>BtAPC7</i>	0.934964	2.470587	3.30673	3.928823	4.093657	3.575047
<i>BtAPC8</i>	1.046626	4.794157	4.128153	4.282357	1.195909	3.070477
<i>BtAPC9</i>	0.872926	9.5131	11.08772	6.113173	5.550617	5.823617
<i>BtAPC10</i>	0.411657	3.146057	4.009803	3.35583	4.7319	0.422492
<i>BtAPC11</i>	0.668551	1.682807	2.33072	2.619883	2.699473	2.66842
<i>BtAPC12</i>	5.329157	5.681487	7.551027	7.241447	4.710057	3.168047
<i>BtAPC13</i>	0.070793	0.995794	1.063923	0.885433	0.366296	1.247499
<i>BtAPC14</i>	0.184033	0.425704	0.161544	0.167623	0.103785	0.20269

Table S4. FPKM values of the AAAP transporter genes of *B. tabaci* B at different developmental stages obtained from the transcriptome data. Note: E, Egg; N1-2, 1st- and 2nd-instar nymphs; N3, 3rd-instar nymph; N4, 4th-instar nymph; M, Male; F, Female.

Gene	E	N-1-2	N3	N4	M	F
<i>BtAAAP1</i>	0.578572	8.22011	2.717903	1.585687	7.123683	0.73588
<i>BtAAAP2</i>	10.22989	42.45715	38.52777	30.73893	48.3596	38.10693
<i>BtAAAP3</i>	3.785387	4.692065	2.689527	2.322433	2.248233	2.04184
<i>BtAAAP4</i>	4.159583	10.31182	14.2902	47.52007	14.30133	25.93267
<i>BtAAAP5</i>	1.33198	2.080803	1.568687	0.717603	0.710404	0.496467
<i>BtAAAP6</i>	1.641683	18.72775	13.70547	13.6206	2.67204	3.782507
<i>BtAAAP7</i>	11.07331	14.9074	16.44983	13.8911	27.82387	13.0303
<i>BtAAAP8</i>	0.673517	1.465861	1.738897	2.17426	2.037133	2.057167
<i>BtAAAP9</i>	2.819563	6.880185	2.748393	8.535253	2.59104	1.546641
<i>BtAAAP10</i>	1.029008	9.85917	7.503357	3.700123	4.457277	3.83278
<i>BtAAAP11</i>	2.5482	12.68444	6.184347	5.73427	7.228037	7.745347
<i>BtAAAP12</i>	6.215703	14.99574	6.97934	3.292537	3.90188	3.541563
<i>BtAAAP13</i>	0.479833	4.671355	3.857377	2.02055	1.56855	1.509409
<i>BtAAAP14</i>	0.211091	5.55668	2.51767	2.96598	1.072565	0.810339
<i>BtAAAP15</i>	0.619186	96.51715	47.78057	34.7676	68.78437	13.0185
<i>BtAAAP16</i>	0.273658	4.3046	2.462887	1.812973	2.743743	1.991897
<i>BtAAAP17</i>	0.101924	9.61594	2.506403	1.356402	9.11255	0.439513
<i>BtAAAP18</i>	0.65359	5.823135	5.923733	2.740057	1.849917	0.677337
<i>BtAAAP19</i>	0.161588	10.45209	5.24838	0.879947	4.270933	0.418059
<i>BtAAAP20</i>	0.0001	1.511268	0.628093	0.3628	1.658513	0.148794
<i>BtAAAP21</i>	5.921527	53.23185	48.2102	66.43923	21.77993	27.6284
<i>BtAAAP22</i>	0.215216	0.248912	1.153725	1.642097	0.087835	0.11174
<i>BtAAAP23</i>	1.477754	6.146175	5.291007	9.562527	2.19235	5.467257
<i>BtAAAP24</i>	1.616925	9.2429	6.08309	5.516797	1.731983	1.393157
<i>BtAAAP25</i>	0.335507	0.192477	2.204997	2.69716	0.07752	0.13494

Table S5. FPKM values of the APC transporter genes of *B. tabaci* B on different hosts obtained from the transcriptome data. Transcriptome data were obtained from our transcriptome database [49]. Note: Ca_F, Female *B. tabaci* B on cabbage; Ca_M, Male *B. tabaci* B on cabbage; Cu_F, Female *B. tabaci* B on cucumber; Cu_M, Male *B. tabaci* B on cucumber; Co_F, Female *B. tabaci* B on cotton; Co_M, Male *B. tabaci* B on cotton. To_F, Female *B. tabaci* B on tomato; To_M, Male *B. tabaci* B on tomato.

Gene	Cu_M	Cu_F	To_M	To_F	Co_M	Co_F	Ca_M	Ca_F
<i>BtAPC1</i>	0.71561	2.59484	6.40264	4.73536	1.47041	4.58135	0.908491	3.3861
<i>BtAPC2</i>	10.5207	1.36497	14.3225	3.39305	9.79553	0.380041	8.20607	1.37777
<i>BtAPC3</i>	7.29165	1.22984	6.51042	1.4965	9.26157	1.88848	6.40502	3.5285
<i>BtAPC4</i>	6.36161	23.6523	14.902	46.7852	7.53555	47.9464	6.21923	33.1499
<i>BtAPC5</i>	0.794669	3.54625	1.53731	8.80196	1.25033	6.69387	0.525921	4.97186
<i>BtAPC6</i>	11.1649	3.12895	21.4266	8.7605	17.6739	7.38503	18.8556	10.263
<i>BtAPC7</i>	8.0125	5.66654	7.86717	8.2144	15.8144	11.544	12.9255	12.3286
<i>BtAPC8</i>	1.37568	8.20883	4.13151	13.2228	2.75481	22.6107	2.2761	10.4078
<i>BtAPC9</i>	6.7649	13.4289	11.5115	19.9085	9.66243	22.5264	6.36677	12.3807
<i>BtAPC10</i>	11.3984	4.45091	9.51716	6.18288	7.7459	4.59249	8.32143	4.25481
<i>BtAPC11</i>	5.69727	4.51959	4.96831	3.13376	12.1851	10.4354	10.1972	9.20616

<i>BtAPC12</i>	5.06789	5.30733	15.3353	13.5422	9.04664	16.7198	6.18353	7.90625
<i>BtAPC13</i>	1.67505	3.53658	1.82143	2.09064	1.38404	3.16782	1.37607	3.69418
<i>BtAPC14</i>	5.1911	4.90379	4.08498	3.14798	7.60005	9.77595	3.28993	2.80665

Table S6. FPKM values of the AAAP transporter genes of *B. tabaci* B on different hosts obtained from the transcriptome data. Transcriptome data were obtained from our transcriptome database [49]. Note: Ca_F, Female *B. tabaci* B on cabbage; Ca_M, Male *B. tabaci* B on cabbage; Cu_F, Female *B. tabaci* B on cucumber; Cu_M, Male *B. tabaci* B on cucumber; Co_F, Female *B. tabaci* B on cotton; Co_M, Male *B. tabaci* B on cotton. To_F, Female *B. tabaci* B on tomato; To_M, Male *B. tabaci* B on tomato.

Gene	Cu_M	Cu_F	To_M	To_F	Co_M	Co_F	Ca_M	Ca_F
<i>BtAAAP1</i>	15.793	2.76318	10.7074	4.95606	14.9092	6.46244	12.5229	4.29521
<i>BtAAAP2</i>	63.3379	43.8228	126.791	84.0371	91.162	105.438	57.9339	67.3925
<i>BtAAAP3</i>	2.65329	2.35534	2.96127	2.4433	1.71382	2.75429	2.01014	2.82914
<i>BtAAAP4</i>	10.0096	29.8833	24.2739	56.9124	18.8115	94.3445	10.6115	47.5306
<i>BtAAAP5</i>	0.62224	0.807301	0.491468	0.135073	1.06187	0.550693	0.35637	1.14082
<i>BtAAAP6</i>	5.47551	13.7767	4.05614	11.5464	5.45311	11.9665	2.80742	9.96717
<i>BtAAAP7</i>	41.8304	10.1087	63.6086	33.6174	35.9897	24.9825	45.6354	20.6175
<i>BtAAAP8</i>	5.72574	2.9992	4.13452	4.87386	4.60781	4.11404	4.44163	3.98968
<i>BtAAAP9</i>	2.26104	2.52855	2.80876	2.10838	4.73305	2.58523	3.90361	2.57737
<i>BtAAAP10</i>	7.68244	14.7411	6.94265	7.02175	9.54278	8.07712	4.63147	11.3793
<i>BtAAAP11</i>	10.8255	12.8747	22.4179	18.0874	12.4113	20.5716	9.14341	20.0882

<i>BtAAAP12</i>	8.30079	2.47066	10.4889	1.78319	8.45991	3.9655	5.95928	5.27128
<i>BtAAAP13</i>	4.79259	7.24894	4.19629	3.62982	6.59685	5.48858	3.74476	5.96935
<i>BtAAAP14</i>	7.84666	5.16724	4.68925	2.8936	7.46658	6.57686	5.86542	6.92944
<i>BtAAAP15</i>	125.87	70.2869	121.095	77.6132	151.895	76.3586	93.9304	75.4808
<i>BtAAAP16</i>	9.55471	4.77589	2.09038	4.85694	5.58524	11.6481	3.64329	10.6702
<i>BtAAAP17</i>	7.08104	2.89034	4.38813	0.875946	9.15722	1.06287	3.2098	1.69543
<i>BtAAAP18</i>	2.17861	0.714491	1.18873	1.09298	2.51374	0.596796	2.76351	1.44238
<i>BtAAAP19</i>	1.04385	0.880296	0.582507	0.368215	0.985434	0.643378	1.61914	0.699736
<i>BtAAAP20</i>	1.38849	0.159674	1.91595	1.13987	3.27698	0.207467	2.38084	0.22564
<i>BtAAAP21</i>	21.4838	42.655	28.2192	58.1763	23.9546	78.2834	22.8014	44.3735
<i>BtAAAP22</i>	0.02456	0.082848	0.0001	0.110893	0.115929	0.080734	0.0001	0.087806
<i>BtAAAP23</i>	1.2516	7.76232	4.0044	15.5997	2.41236	16.9714	2.2779	11.1867
<i>BtAAAP24</i>	5.99708	1.87615	3.62727	2.8388	6.57461	3.49758	2.78466	4.26504
<i>BtAAAP25</i>	0.024478	0.082572	0.0001	0.0001	0.069326	0.241397	0.0486	0.029171

Table S7. Amino acid sequences of the APC transporters of the eight species.

Gene	Amino acid sequences
BtAPC1	MSQTPEPPPEKVPLRATMEDIDLGSDETETDKKDDSEVKLEAKMSLLNGIT VIVGSIIGSGIFVSPSGVLRRTTGSVNMALIVWTISGVFSMVGAYCYAELGC MISKSGADYAYIMETFGPFLAFIRLWIECMIVRPCSQAIVALTFYSIYVLKPF VDCDPPDLVRLAVCCIMVLTFINCYSVKWATRVDYFTYAKLLALFVII LAGVYQLFQGQTQHFTFDNTTTEVTSIALSFYSGLFAYNGWNYLNFIIIEEL KDPVRNLPKAI AISCSLVTVVYVLANVAFYTTLSPQEVLNSEAVAVTFADR LFGVMAWTIPV FVAMSTFGAVNGVLLTSSRLFYAGACEGQMPEILTMIQI HRLTPAPAVLCIAFLSMLYLTVSDIYALINYVGFATWLSIGVAVLCLPVLRY TQPKLHRPIKVNLFPAIYIICSVFVTVVPMI ASPVETGIGCLMILTSVPVY LVFIAWKNKPKPLQRAVVKMTHALQKSMMVVGKQSAPSTL
BtAPC2	MTSSSELGTPMVPVGTKQEKVCMKKQLGLLEGVAILGIIFGSGIFISPTTV IQDAKSAGLSLLIWVLCGILSMVGALCYAELGTSIPKSGGDYAYIFEAFGPI PAFLYLWDAMLIFVPTTNAIMGLTFANYI IKPFPTCDVPDLPKKLIASVI CFLTFLNCYNVKATARTQNVFMIAKIAALCIIILAGLAYMTFADRGMTNFE DVWANTTSDAGQIAVAFYSGIFS YSGWNYLNFMTTELKNPYVNLPRAIYI SLPIVTFIYVLANVAYLAVLTPVEMIQSEAVAVSFADSIMGPLAWTMSLMV AMSAFGGLSVHIMTSSRMCVFGARYGHFPAMLSHISVDRFTPTPSLVFLN ILSLIMLYTSNVRDLITYSTFVESFFITLSVSGLLYLRWKQPNRPRPIKISIW PILFVILCLFLVLPFFDSPLVVGVGLITLSGVPVYFVGVVWQPKPKWFR SALDKTTYVVQKLFMSAKEEREL
BtAPC3	MVSFWDISISQRKTFSTIAKEESKLRVLTTYDLTALSIGSTLGIGIYVLPGA VAKNVAGPSVVL SFVLA AFACVLSGICYAELSSRVPKAGSAYIYAYVTVG ELMAFIIGWV VIMEYVIGASSVARGLSVYVDSL FNGTMEATFREYQIEN VPFLSPYDFDFTCAVCILGIALSVGLKESARMNNVLV VINAVMLIVIGVG SLEANFHNWALTPKEVPSGYGVGGFFPYGVTGAIAGAATCFYGFVGFDSI TTTGEEVENPQRALPLSII SLTICVLYCGVAIVLTLMWPYLQDVNAPLP YVFGQIGWPVWQVWVTIGGIVGTFASLIGSLLPIPRVVYSMADDGLLKF LATVHPKFGTPFTATLVTSVIAGVLGGIFNLKQLVDLMSIGTLLAFTLVAVC VLILRYRDEPDENCMLINSEIGESSRLTQVWLGEKTTVKKIFKQLWNWNK LTIPTYLSSAIVTVETILFVSCSIGLVSLVNYKASLDASNFAVYTIITVSMIF LLISISLQPTSLISLQFKVPFVPILPAISIMFNVYLMLLLDLATWIRFVSWLS VGFVIYFCYGITHSSERKSAIQNQRCSGGYDTLSPNISIVRDPIL
BtAPC4	MKHKFRDLFSCSNSSSELSNNNNTTASN NNLPAGNHAQNGKEGVQWRS GMGGRGLGLGLGGAGSGGGGSGGAGGSGGEAETDDQDDGPRGDKLE GADPAQDDTLHLQRRVGLLSGVALIVGTMIGSGIFVSPSGLMVRTGSIGM SFVIWIACGVVSLFGALAYAELGTMNPSNGAEYAYFMDAFGPIPAFLFSW VSTLVLKPSQMSIICLSFAKYAVEAFVDECEPPELSVKLVSVLTILVILVNC YSVNLATGVQNTFTA AKLFAILIIIVGGLYQLMKGN TKNLNMFEGTTSS VGNLATAFYTGLWAYDGNLNYVTEEIKSPSKNVPRSIMISIPLVTICYV LINLSYLAVMSPAEMVESEAVAVTFGNRILGLMAWLMPLSVTISTFGSAN GTLFAAGRLCFAASREGHLLDILSYVHVRRLTPAPGLIFHSIIAIAMVMSG

	TINSLIDFFSFTAWIFYGGSMLAVIVMRYTRPNFPRPYKVPIIIPWTVLLISL YLIVAPIIDSPQIEYLYASFFIFAGLLVYVPFVHYKVNCKCKMEKFTVFCQLL LEVAPTNITYD
BtAPC5	MKIPTIPGPGLFPTGDYKKDGLSLFAKLIRTKNVEGMDGEISLKRTEIKSD KKLKLKCLTTLDTSLGVGSCVGTGMVYLVSGMVARNYAGPGVIVSFFI AALASIFSGACYAEFGVRPHTTGSAYMYSYVTVGEFIAFVIGWNMILEY LIGTSACACALSACFDALTSAGISKTVASVTGTIFGRPPDFLASIITVLMTIL IAAGVKKSLVFNNVLNAINLAAWVFIMSAGLFYVNTDNWSQHKGFLPY GWSGVFTGAATCFYAFIGFDIIATTGEEANNPKKSIPLAIVSSLVILMAYV TSSMMLTLIVPYEEVDQDSGLVEMFGQVGAYKQCQYIVAIGALAGLTVSM FGSMFPMPRVVYAMAQDGLIFRSLGQVLPFTGTPVFATFCSGAAAAIAAL LIKLEVLVEMMSIGTLLAYTLVSTCVLILRYQPHTTNLMDLLPESLRTPLN RSPSKENVGNGQAGKYGTTLPADNMKTSYSGVISQPPVTTLNNQHRV MVRKVTRRSOSSPDSDDTYAGEEEDLSMRDDQFLVSDRNENKFYGSV HAGSTQASAGIKPRFSYISHRLQAATYLCPAIFPWVDTGPATEESGMMVM KYVLLLYILILFDLLIVCAMDSMGTFKLKLVLYILFASIIAVLALISRKPQNR KALLFMTPCVPFVPGIAVAVNIYLIFKLSVLTIVRFTVWMTIGFGVYFYYG IKHSSLEHEPDDDEDGLRGAEGGQONIEMKPPLSKATSPARQPVSAHPKQE VKPEPPARPPTSRAAPLSQRSESLFVPPTEFPTWDD
BtAPC6	MAEPGAAGAGTLNAPSSSAEARGSGVDGPVELKKEIGLLDGVAIVGVIV GAGIFVSPKGVNIENAGSAGLGLIVWFLSGGLSMIGALCYAELGTMIPKSG GDYAYINEAFGPLPAFLFLWVALMVILPSSNAITALTFAQYILQPIWPDCEP PYLAVRLIAAVVCLLTAINCYNVKWVTKVQNVFTLTKIFALMTIILSGLW LVVNGKTEKISRPFEGSNYDPGHLALSVSGLFSFAGWNYLNFVTEELKN PYENLPKAICISLPLVTVVYLFTNVAYFVALTKDEILKSSAVAVTFANRLF PMAWVMPLFVACSTFGGLNGAIFASARLFFVGARNHGLPKAIALINVKHS TPVPSLIFMCSVTLCQMLIKDIYSLITYTVFVEALLTLFSITGLLWLRVKRP NAQRPIKVNILPLIFFVICSFLVVLPIFVTPVEVGVGLAFIFSGIPIYLIFIYW EQKPSWFRYIIDNFNLCAKLFRCVLEDTVETETKVS
BtAPC7	MTPPKDGFELKKFLKNLCPEECRCEGKSRLNSESSNMYIEVFSGKK AEEGKPAKGVQLQRELGLMSAVNLILSVMIGSGIFVSPTRALKEAGSIGM ALIVWALCGTISMLGALSAYELGTVVNKSGAEYSYREAFGPLHKFWGP LPSFINCWVSIVFVRPAEIAIIILTFAYFTQLLNPIIPPNEIDNYYDRKKIVAI AALFIITAINFFSVKLYVKIQNIFSSFKVAACFLVIGCGLYYIFIGKTQNLNP FKGSDLSPRAFAVAFYHGLWAYDGWSSVTTVTEEIKKPNKNIPRAVIAVP LVTMLYCFMNVSYMTVLSVPELIQAKAVANEVGVKVLGHFSCLIPMGVA LSTFGCALSVQFVTRLCYSAKNGHMMEIFSIVHVKRLTPAPAVLLQG ALCLVCILAGDIITLIEFASFLVWTFYGLAMVALIVMRYTKKDVPWPVKV PIVIFVMIIASCLAIIPIAMKPPQYLIAVGFLISGFVVYIPFIYFQKKLFGA DMFTKAVKSVMNVPDQDQELIAKKTAKLNDQSDPKEALCVVSLLS ETKDDSCCDEPCCDDSCHKKSCCDKSCLEKSCCNESCLEKSCCNESCLE KSCCDESCPRQ
BtAPC8	MPGSRHKIIGHVFSGICTKMNRKQLSSGEEVMDTPLKRCCLNTFDITLLG VGHMIGAGIYVLTGTVARDLAGPGIILSFILAGITSILAALCYAEFGARVPK

	<p>AGSAYVYTYISVGEFVAFVIGWNIILEHMIGAASVARAWSGYVDSLLSGS ISAATVASIGELHEKWLG RYPDLLAFMVCISYALLLGIGVKSSAVVNSLLT LVNLSVMGLVIVIGFWYGKLENWNANNRGLFPYGFSGVVAGAATCFYAY VGFDSIATSGEEAQDPSFSIPVATALSMTLVSFGYILVSAALTLMVPYTMID ASAALPEAFSMMGLHWVKYAVTIGALCGMTTLLGSLFSLPRCMYAMA QDGLIFAFGLKINKTTQVPVNNLIISGLMSATIALLFDFLEKLVEFMSIGTLL AYTIVSASVIVLRYRPNTPPPSNDNVSVNDVYIMSPSPGVEEFKVCMMGR LKPSFDWLEPVVGVWCKPGEAVSVAVFIFTCFSALLCFHFHWATAQMENG AWWTVFGCVFLIAVMLFCLLVIEAHEQNRTGLTFMVPLVPYPALSILFN VELMANLNILTWLRFMIWMILGLLVYFLYGIHHSKENDTTSSYSVLMTSS EATKSKWGSIPAPVTIPVTRKRRSGKGDRQAIVNSDDDDTSSD</p>
BtAPC9	<p>MTFMRGVIGTLTRIKVSDIVIDSDAPKLARVLDLFDLTLGVTTLGVG TYVLPGAVAKNTAGPAVTVCFIAA AVVSILAALCYAEFAARVPKAGSAYV YCYVTVGEFCAFIIGWNLLEFVIGTASVAKAFTGYVDALFGGGYASMM QSVMPMHVSFLAQY PDLMALCVVLLFSLLLAWGVKESTFINNIFTVN VTVVIVIFAGIYVSKMSNWFIDPAMIPPEHKAAGKGGFMPYGVSGVLA GAATCFYSFGGFDSICTTGEEAKNPQRTIPLAIVMTLAI VFAVYFGVSSVIT MAWPYYDQHIDAPFPYVFDK TGLHAIKWIVTVGALFALCTSMLGVAFPL PRILYAMSSDGLIYKFFSRINAYTQTPVLATLISGLLAGIMAAMFDLTQLID MMSIGTLMAYSIVALCVILLRYKEDESSVEDVSKKQNDFGSNKTEQYTF SVLSILSTEKESPTARTVFIARISTTIFCAVTIIQTLILVLSSESIFSAESFVSVL STLVVLANFVILGATMYVISLQPQSDTTYLKFRVPGVPVVPCCCIFMNTY LMAQLDFHTWVRFAVWLAVGFVIYFTYGIQHSVQGILDRQQAQKELKSQ PPPPAQMYK</p>
BtAPC10	<p>MFPPNVKVLTKFASV VTRLKSEDSVDLESNKPKPKLARVLTVLDLTALG IGSTLGVGSYVLPGEVARNTAGPAVTVSFFIAAVVSILAALCYAEFAARVP KAGSAYVYSYMTVGEFCAFVIGWNLILEYVIGTASVAKALSGYLDALTG KVFETYMLQHYP MNVSFLGPYPDLISFSVIMLLSFVLAWGVKESTMLNNI FTALNLTTVGIIIIAGITVAKPSNWFIAKEDLPVDPNSKYNPGE GFMFPFG WTGVLVGAATCFYSFIGFD CIATTGEEAKNPQKTIPLAIVLSLLIIFCVYFGI SAVLTMMWPYYDQDPAAPF SVFEKVGMPQVKWIVSVGAVFALCTSLL GSMFPMARILYAMAEDGLIYTFLAQINKKTLTPLFATFVSGVLAGIISAIFN LTQLIDMMSIGTLLAYSIVSLCILLR YRKYEISEETKPRNEPAVNHEEPK KEYPGFISGLLNLENERRATDFSEAI SKILIGTFCILCFMHVGG LILMERRM RFEINFWFKAYLIGV GILLVISVILLWRQPQANTEKLTFTAPLMPIVPTLSIY VNTYLMSKLDKATWIRFV VVLLLGLLVYMCYGLRHSKEGKNRFIAAEK KEKISKS</p>
BtAPC11	<p>MYIEVFSGKKAEEGKPAKGVQLQRELGLMSAVNLILSVMIGSGIFVSPTR ALKEAGSIGMALIVWALCGTISMLGALS YAELGTVVNKSGAEYSY YREA FGPLHKFWGPLPSFINCVWSIVFVRPAEIAIIILTFAEYFTQLLNPIIPPNEID NYYDRKKIVAIAALFIITAINFFSVKLYVKIQNIFSSFKVAACFLVIGCGLYY IFIGKTQNLNPFKGS DLS PRAFAVAFYHGLWAYD GWSSVTTVTEEIKKPN KNIPRAVIIAVPLVTMLYCFMNVSYMTVLSVPELIQAKAVANEVGVKVLG HFSCCLIPMGVALSTFGCALSVQFGVTRLCYSAAKNGHMMEIFS YVHSKR</p>

	LTPAPAVLLQGALCLVCILAGDIITLIEFASFLVWTFYGLAMVALIVMRYTK KDVPRPWKVPIVPIFVMIIASCLAIPIAMKPPQYLIAVGFLISGFVVYIPF IYFQKKLFGADMFTKAVKSVMNVPDQDQELIAKKTAAQLNDDQSDPK EALCVVSLSETKDDSCCDEPCCDDSCHKKSCCDKSCLEKSCCNESCLE KSCCNESCLEKSCCDESCPRQ
BtAPC12	MTSRNATDVKAKLPVEVDDEKVQLKRKITLPNGVALIVGTIIGSGIFVSPT GVFQYTGSSVGLVIWTLGIFSTIGALCYAELGTCISRSGGDYAYILEAFG PLPAFLRLWSALLIIRPTTQAIVAITFAQYAAKPPFGDCKPPEQAVTILAAV CLCLLTSINCLSVRWSMQVQSVFTTAKLFALAAIVFFGVGHILLGNTENFD HAFDGDYNPANIALAFYSGLFAFGGWNYNLNFVVDDELQDPFKNLPRAIWI AMPIVTIVYVTANLAYFAVVAHEMLTSPAVAVSFGDRMFGQARWAVPVF VALSTFGGVNGILFTSARLFVTGAQEGHLPPIFSFIHVKRCTPIPSLLFTCF MSLLMLCSTNVFVLINYSQVLWLSVGVCIAGLLYLRLHTKPDMPRPIRVH TALPIMFLICCVFLVSPVVAEPFNTIVGLLIILSGVPVYYIGIKWKTKPFAL KSAHNDFTVFLQKALFVLSPEESENPVSLCTTLVSNRQNLH
BtAPC13	MFPPNVKVLTKFASVTRKSEDSVDLESNKPKPKLARVLTVLDLTALG IGSTLGVGSYVLPGEVARNTAGPAVTVSFFIAAVVSILAALCYAEFAARVP KAGSAYVYSYMTVGEFCAFVIGWNLILEYVIGTASVAKALSGYLDALTG KVFETYMLQHYPMNVSFLGPYPDLISFSVIMLLSFVLAWGVKESTMLNNI FTALNLTGVIIIAGITVAKPSNWFIKEDLPVDPNSKYNPGEFGFMPFG WTGVLVGAATCFYSFIGFDCIATTGEEAKNPQKTIPLAIVLSLLIIFCVYFGI SAVLTMMWPYYDQDPAAPFSPVFEKVGMPQVKWIVSVGAVFALCTSLL GSMFRWRGFYTLWLRMVLSTHFWRKSTRKHLMFPMARILYAMAEDGLI YTFLAQINKKTLTPLFATFVSGVLAGIISAIFNLTQLIDMMSIGTLLAYSIVS LCILLRKYRKYEISEETKPRNEPAVNHEEPKKEYPGFISGLLNLENERRAT DFSEAIKILIGTFCILCFMHVGGILMERRMRFEINFWFKAYLIGVGILLVI SVILLWRQPQANTEKLTFTAPLMPIVPTLSIYVNTYLMKLDKATWIRFVV WLLGLLVYMCYGLRHSKEGKNRFIAAEKKEKISKS
BtAPC14	MTSRNATDVKAKLPVEVDDEKVQLKRKITLPNGVALIVGTIIGSGIFVSPT GVFQYTGSSVGLVIWTLGIFSTIGALCYAELGTCISRSGGDYAYILEAFG PLPAFLRLWSALLIIRPTTQAIVAITFAQYAAKPPFGDCKPPEQAVTILAAA CLCLLTSINCLSVRWSMQVQSVFTTAKLFALAAIVFFGVGHILLGNTENFD HAFDGDYNPANIALAFYSGLFAFGGWNYNLNFVVDDELQDPFKNLPRAIWI AMPIVTIVYVTANLAYFAVVAHEMLTSPAVAVSFHLNTKFIKFTPVNSSL PHWAQKLTGQRVMEGHPLLKSGKGEVKGAPYLESVSFGDRMFGQAR WAVPVFVALSTFGGVNGILFTSARLFVTGAQEGHLPPIFSFIHVKRCTPIPS LLFTCFMSLLMLCSTNVFVLINYSQVLWLSVGVCIAGLLYLRLHTKPDMP RPIRVHTALPIMFLICCVFLVSPVVAEPFNTIVGLLIILSGVPVYYIGIKWK TKPFALKSAHNDFTVFLQKALFVLSPEESENPVSL
AaAPC1 (AAEL003 919-PA)	MTNEAENQLTGKDTGGGGKVVLRKITLVNGITIIIVGTIIGSGIFVSPAG VFLYTKSVGSSVGLWCLSGILSTLGALCYAELGTCITRSGGDYAYLLVAFG PLVGFLRLWMALLIIRPTTQAIVALTFAQYAVKPPFPECDAPDNSVRLAA VCLCFLTAINCISTKWAMKIQNVFTMAKLTALISIILAGVWYLATEKTENF ENAWEGDYALSSLAYASYSGLFAFGGWNYNLNFVTEELENPYKNLPRAIW

	IAMPLVTGIYVLVNLAYFAVVPRHDMLASIAVAVNFGNRVFGPVAWLIPVF VAMSCFGGVNGILFTSARLFSTGAQEGHLPWFSLVHVNRQTPIPALIFTC VTSILMLMTPNVVALINYFSQILWLSVAACIAGLLWLRVTKPNMPRPRIRVN LALPIIFLTCCMVLVLLPSFSEPMNLIIGMAITLSGVPVYYVCVVWNKNKN RSRNVLMQWIERGCQILFNAAFVDCHHDRKNDRELSDMQTSIVDEKNV SE
AaAPC2 (AAEL014 161-PA)	MAKIAAGDALAPVEGFGEAPRSRVSTGASSRLRAEQSDSDGGIKLKKE LGLMDGVAIIVGVIVGAGIFVSPKGVLLYSGSIGQAIIVWILSGVLSMVG LCYaelGTmIPKSGGDYAYIGEAFGPLPAFLYLWVALLILVPAGNAITAITF AQYLLQPLWPTCEPPYESVRLLAALITCLLTAINCYNVKWVTRVETFTG MKVGALLVIVAAGAWYLFSGNTELLENPFENSKIQPGFIALAFYNGLFSY SGWNYLNFVTEELKDPYRNLPRaICISMPAVTHIYVITNIAYFAVLPPDEML SSQAVAVTFADKMLGFMAVVMPLFVACSTFGSLNGAIFASSRFFVVGARN GHLPAaislinvNCLTPIPslifLCLLTLFFFIRDVFSIINYVSYVEILFIFISV AGLLRLRKKHPDAKRPIKVSIIPIIFLLTAGFLVIFS VFESPTevaIGTLIIVL GIPVYYITIHKPLEWLAQTSQRINNVCaKLFCLCMPNTEKND
AaAPC3 (AAEL008 406-PA)	MTVVKAAPTSGGLKREMGMSAINVIISVMIGSGIFVSPtaALKYSGSVG FCLVWAVCGIISLLGALCfaELGTVVPRSGAEYAYLIEAFKKTnkFWGP LPSFICAWVYVVVLRPAEIAVIILTfaEYSILPFSNLLGLKSLPEEDLHNLK LIALLGLGVITYINLSSVKLYVTINNIFGFCKVfaCLIVIFGGIYQLAIGNTE NLSRGfAGTNFSPGHIALAFYNGLWAYDgWSSVTTITEEIKRPEVNIPRSIII AVPIITGLYVFMNMAYMTVLSPEEMIQSEAVGLDFGDRVLGSFSFLIPLGV ALSTFGCALSIQFGVTRLCYVASQEGQMLEPLSYIHVRRATPTPAVAMQGI LAFaFILVGNIEELIELASFLIwFFYGSaFIALLTLRKTQPDTPRPYKVPFV PIFALGVSIFLSVVPiIAEPSPKYFFAVaFILSGVAVYTPFVYYKIRPKWMNK LTYLIQVLFaVPTAEKFE
AaAPC4 (AAEL009 358-PA)	MPSARRMILGHVMSGLCskMNRtkQLPADLMETPLNRClnTFDITLLGI GHMVGAGIYVLTGTvAREMAGPGIVLSFILAGMVSMlaALCYaEFGTRV PKAGSAYVYTYVSIGEFwAFVIGWNIIEHMLGAASVARAWSGYVDSML GNIVANTTMEITGEMHEKLLAKYPDFLAFGVCMSYAIAlaAGVKATAMI NSILTTVNVVMSLVVVLGFWYATPANWslPEQGFLPFGGGVLAGAAT CFYAFVGFDSIATSGEEAKPNVSIPLATILSLCVVTIGYVLVsaALTLMIP YNEINpAAALPDAFGTRGIawAKYAISTGAICGMTTTLGSLFALPRCLYA MASDGLLFSCFGKVNTKTQVPLLNlavSGLCSALLALLFDLEKLVEFMSI GTLLAYTIVSASVIVLRYRPISVEETVHLAPDTPGTDEEENPSSSSQSSAVD PSSPTSEMIEIALAGRLRPQFRWLEPILGRCEPGVACSGAVLLFCVLSVAVC FQLEVSWDELYDGTWWALGLYGfLLfCLVACIVVISaHHQNTRGLQFKV PLVPYIPALSIFCNIELMVHLSFLTWLRFFIWLSIGMLVYFLYGIRNSKEGEL GTSYSMLMSTQEAIRGWGATHSAGLSGGTRVTVTKIVKGRVSRKSVDKQ AIIDDDDDDS
AaAPC5 (AAEL009 362-PA)	MSTPSCWKILTRKKILSIEADGAADNGKLGRILNTYDLTALGVGATLGVG VYVLAGHVSKDQAGPSVVLsFLIAAAASFLAGLCYAEFGARVPKSGSAYI YSYVCIGEFMAFVIGWNLmLEYIIGSASVSRGLSLYIDTLANDTMKIRFRE IAPMEWDFMSSYFDFFGFSVAILLgVALAFGLKkSTMVNNFFTVLNIGIVL

	FVIIAGALNADISNWNVNPNANVSTIYNVGEFFPFGFEGTLRGAATCFFG FVGFDCIATTGEEVKNPRKAIPRAILLSLCTIFLAYFGVSTVLTLMWPYYK QDVNAPLPFVFNEIGWTYAKWTVAIGGIIGLVASLFGAMFPQPRIIYAMAQ DGLVFKALGKVSSRFKTPVFGTLCAALLTGTMAGLFDLKAALVNMLSIGT LMAYTVVAISILILRFSEAPQTASIPSTSKQVFESSNLLRSGGRLTGSAFMR QLFNISCVRIPSHASTSVVGVLTLYCLVSLALSILTIFYAKQPLYDMEPWA LTLAGTLLGLLLLLILLMSIQPRETAEAPFKVPFVPLLPASIFVNIYLMML DVYTWIRFGIWMGIGLALYAFYGFNSYRDVYSCRPGWTKLKYGH
AaAPC6 (AAEL002 063-PA)	MTVVKAAPTSGGLKREMGMSAINVIISVMIGSGIFVSPTAALKYSGSVG FCLVWVAVCGIISLLGALCFAELGTVVPRSGAEYAYLIEAFKKTNKFVGP LPSFICAWVYVVVLRPAEIAVILTFEAYSILPFSNLLGLKSLPEEDLHNLK LIALGLGVITYINLSSVKLYVTINNIFGFCKVFACLIVIFGGIYQLAIGNTE NLSRFGAGTNFSPGHIALAFYNGLWAYDGWSSVTTITEEIKRPEVNIPRSIII AVPIITGLYVFMNMAYMTVLSPEEMIQSEAVGLDFGDRVLGSFSFLIPLGV ALSTFGCALSIQFGVTRLCYVASQEGQMLEPLSYIHVRRATPTPAVAMQGI LAFAFILVGNIEELIELASFLIWFFYGSAFIALLLTRKTQPDTPRPYKVPFV PIFALGVSIFLSVVPPIAEPSPKYFFAVAFILSGVAVYTPFVYYKIRPKWMNK LTYLIQVLFEAVPTAEKFE
AaAPC7 (AAEL010 988-PA)	GTSSVARGMSGYIDELAGKKISTALKETMGMNVDFLSDYPDFFSFVVVLI LAALLAYGVKESTLMNIFTGVNLCVIAIVLVAGGMNCDPANWMIKPED IPKGIDAGVGGFAPYGFAGIMAGAACKCFYGFVGFDCIATTGEEAKNPSRN IPLAIVISLIIIFLAYFGISTVLTMALPYLQNPDAPPHLFEQLEWHAIKWI VSIGAI FALCTSLGAMFPLPRVLYAMSTDGIIYKLRVHVKPTQTPVLATI LAGLLAATMAMLFNLQQLIDMMSIGTLLAYTIVAVSVLVRLYEDQTMQ SATVTIPNVFRQVFNVDKLKSPTLSSSIVKFGICIFGTIFIQINGISSTDELS AEYPGTLAAISVLGACMVFLIIVTALQPTENTKLTFKVPLVPLLPMLSVFF NLYLMFQLDAGTWVRFVAVWVIGYLIYFMYGIKHSVE
AaAPC8 (AAEL002 525-PA)	MVLKQRGA AIELHSPTEDVLVSPGTESLPP IENGATAGSGTIDGGGNERV KMKKELGLLEGVAIILGIIFGSGIFSPKGV LQEVGAVGTSLVIWVTCGLLS MIGALCYAELGTAIPKSGGDYAYIYEAYGPLPAFLYLWDATVIFVPSTNAI MGLTFASYVFQPLFAAGCSVPTIGLQLFAAVTICLLTYINAYDVRVTTKMQ NVFMFTKIGALVLVIVGVVWMSLGGTENFENAFENTETDPGKLAVAFYS GIFSYAGWNYLNFMTTEELRDPYKNLPRAIYISLPLVTGIYVLANMAYVAV LSPQQILSSDAIAVTFAQKAMGWGAFVMPILVAISAFGGLSVHIMTSSRMC FVGARNGHMPEILSHINVNRYTPMPSLVFLCLLSLLYLFISDVYVLITYSSI VESFFIMLSVSAVLYFRYTRPDINRPIKVQLWVPTLFVIICAFILIVPCYVAP YEVGMGVLLTLAGIPVYYVGVAVWKNKPEFENVLRRATQFCQKMFMTA KEENDDEE
AaAPC9 (AAEL011 654-PA)	MKFSIPLPGGGTGLTLFSKLVRTKDLRKLQGEDPKSTKPKLTKCLTTDLT SLGVGSCCGTGMVYLVAGMVARNIAGPGVVL SFIIA AIASIFSGACYAEFGV RVPHTSGSAYMYSYVSVGEFVAFVIGWNMILEYLIGTSACACALSASFDS LSGGAISRSIASAVGTIFGRPPDFIAFGITLMMTFVLALGASKSVLFNNVLN TVNLA SWVFILTAGMFYVDTATWSEHEGFLPYGWSGVFTGAATCFYAFI GFDIIATTGEEAHNPQKSIPKAI VGSVLVIVLFVYVTSSFILTLTPYDHIDTG

	SALVQMWTYVVGAPKCRALVALGATAGLSVAMFGSMFPMPRVIYAMAQD GLVFRMLSQWTRTGVPGLATIGSGLAASLVALTVRLEVLVEMMSIGTLL AYTLVSTCVLVLRYQPHSTTLVDLLPAQLRTPQPPSTPDPTTQQRVKGNVL VKKITRGSPPSDDSFADDSFDGFMGRDDQFLVSDKSENKQFYGAVHGAPQ GGSNPFTLWGFYSYIGRQIEQYSYLCPLFPWVNPMPATHESGMFVTKMV GLMYACIFFLDLMAIGITGTFSLVYTALVLGILGILLIISRQPQNRYALPF LTPGLPFIPTIAITVNIYLIFKLSILTTLVRFTVWMSLGLIMYFYYGITHSSLEN PSEEFELTVDGNGQQPPSGQKTNLKVPSQSNHREQTAVWDRHGYENRM ATNDDGSELQWGTSNSSWNPDAWGDTTIYDPPRQQQPPVPQRSSHQYE STNIFQPPPTQQRPEAKKDGFGMFYQETPSYPTWDD
AaAPC10 (AAEL002 557-PA)	MEDDSLKDKDIRKDSVKSATSNGTAGGGDGEITLKPMTLVNGVTIVVSGI IGSGIFVSPTGVLINTGSVNMSLIVVLSGLFSMVGAYCYAELGTMIKKS GADYAYIMETFGPFLAFIRLWIECMIVRPCSQAIVALTFVYVVKPFFPECQ PPDDAARLLAVCCILVLFVNCWDVKWATAVQDIFTYAKLLALFIIIGAGA YFLFKGNTEHFTFENTKTEVTSLALSFYSGLFAYNGWNYLNFIIIEELKDPV KNLPRAIAISCTLVTVVYVFTNVSFYTVLSPEEVLGSAVAVTFADRFGM FAWTIPVFVALSTFGAVNGILLTSSRLFYAGACEGQMPEILTMIIQRLTPTP AVLIMALLSMVYLTVSDIFALINYVGFATWLSIGVAVLCLPWLWRWAQPNL ERPIKVNLIPIFYLIATVFVTVVPMIASPVETGYGLLMILTSIPVYCFIAWR NKPKWFNHTMGFTQSLQKLMVVRPKQK
AaAPC11 (AAEL012 129-PA)	MEDSVYSKLSFNDSYFVPGIGHMVGAGIYVLTGTVAREMAGPGIVLSFI LAGMVSMLAALCYAEFGTRVPAKGSAYVYTYVSIGEFWAFVIGWNIILE HMLGAASVARAWSGYVDSMLGNIVANTTMEITGEMHEKLLAKYPDFLA FGVCMASYAIALAAGVKATAMINSILTTVNVVMSLVVVLGFYATPANW SLPEQGFLPFGFGVLAGAATCFYAFVGFDSIATSGEEAKNPVNSIPLATIL SLCVVTIGYVLVSAALTMIPYNEINPAAALPDAFGTRGIAWAKYAISTGA ICGMTTLLGSLFALPRCLYAMASDGLLFSCFGKVNTKTQVPLLNLAVSG LCSALLALLFDLEKLVFMSIGTLLAYTIVSASVIVLRYRPISEETVHLAP DTPGTDEEENPSSSSQSSAVDPSSPTSEMIEIALAGRRLPQFRWLEPILGRC EPGVACSGAVLLFCVLSVAVCFQLEVSWDELYDGTWWALGLYGFLFCL VACIVVISAHHQNTRDLQFKVPLVPYIPALSIFCNIELMVHLSFLTWLRFFI WLSIGMLVYFLYGIRNSKEGELGTSYSMLMSTQEAIRGWGATHSAGLSG GTRVTVTKIVKGRVSRKSVDKQAIIDDDDDDS
AaAPC12 (AAEL012 128-PA)	MDKFFKALCRKKPNDGSHSKLARVLTLLDLTGLGVGSTLGLGAYVLA GSVAYEQAGPGVVVSFVIAAVAAAIAAGLCYAEFAARVPKAGSAYIYTYITI GEFAAFTIGWNLMLEYIIGTASVARGLSGYIDALIDHRMEKALQSIVEFRV SFLGKHPDIFSFFVLTITALLAYGVKESTVLNNIFTGVNLMVIVVVLISVG TKVNPDNWNKPEDIPEGVKGGVGGFMPYGLAGVMAGAAKCFYGYVG FDCIATTGEEARNPSRNIPLAIIIFSLIIFLSYFGVATVLTMALPYYNQDPKA PPPNLFLNGLGWQEIKWIVSIALVTCIVSAILVNAQDYLSAQYPLNLITLIL AMSILILFLVIACQPTEESKITFKVPLVPFVPMLSILVNIYLMFQLDVNTWIS FSIWLLVGFVIYFTYGIRHSVLGSGSQTLSQSLENPFCMVGLEKA
AaAPC13 (AAEL012)	MRQGGRIDRFWIALTRKKRNEDDGSQSLARVLSLLDLTGLGVGSTLGL GVYVLAGSVAYEQAGPAVVISFLVAAVASAIALCYAEFAARVPKAGSAYI

131-PA)	<p>YSYVSI GEFAAFTIGWNLILEYVIGTSSVARGMSGYIDELAGKKISTALKE TMGMNVDFLSDYPDFFSFVVVLILAALLAYGVKESTLMNIFTGVNLCVI AIVLVAGGMNCDPANWMIKPEDIPKIDAGVGGFAPYGFAGIMAGAACK FYGFVGFDCIATTGEEAKNPSRNIPLAIVISLIIIFLAYFGISTVLTALPYYL QNPDAFPFHLFEQLEWHAIKWIVSIGAIFALCTSLLGAMFPLPRVLYAMST DGIIYKLRVHPKTQTPVLATILAGLLAATMAMLFNLQQLIDMMSIGTL LAYTIVAVSVLVLRVEDQTLMQSATVTIPNVFRQVFNVDKLSPTTLSSSI VKFGICIFALLVCAVCTILVLATDELSAEYPGTLAAISVLGACMVFLIIVTA LQPTENTKLTFKVPLVPLPMLSVFFNLVLMFQLDAGTWVRFVAVWIVIGY LIYFTYGIKHSVEGAIKQAAVNGNGITIVKNGIDNNAFDGSDNDFVSTV PAENPRKSSKNSYSLNNE</p>
AaAPC14 (AAEL003 387-PA)	<p>MACGLLSLLGALAYAELGTMNTSSGAEWAYFMDAFGAWPAFLFSWVST LVLKPSQMAIICLSFAQYAVEAFVAECDPPLTVVKMVAILAIVSILFVNCYS VNLGMAVQNIFTSAKLVAVLIVICGGAYKLFQGNTOHLQNAFSGPTPSLG AIATAFYTGLWAYDGNLNYVTEEIQNPSKNLPRSIIGIPLVTLCYALIN VSYLAAMSATEMIESEAVAVTFGNRILGALAWLPLSVTISTFGSANGTLF AAGRLCFAASREGHLLDILSYVHVRRLTPAPGLIFHSLIAGAMVLYGTIDS LIDFFSFTAWIFYGGAMLALIVMRYTKPNYPRPYKVPLIIPILVMVISGYLV AAPIIEKPQIEYLYAVVFIFAGLIFYVPFVHWGYHPKFMDNFTLFFQMLFE VVPTTSMAMFD</p>
AmAPC1 (XP_00655 7900.1)	<p>MPSVRRMILGHVMSGLCTKMNRTKKLQGDLETPMKRCLSTFDITLLGI GHMVGSRIYVLTGTVARDTAGPGVLSFLLAGIASLLAALCYAEFGARIP KAGSAYVYTYISVGEFWAFVIGWNIIEHMIGAASVARAWSEYVDSL GSGISNYSRRIMHGYTMAEPLGSPDVLAAALCLFYAMLLTLGVKSSATV NSLLTLVNLGVMGLVIGLGFAYAKLSNWSCEHGGFLPYGFTGVLAGAAT CFYAYVGFDSIATSGEEARDPAYSIPRATLFSMTIVTVGYVLVGAALTLVIP YWKINPTAALPEAFSSIGIPWAKYVISIGALCGMTTTLFGSLFSLPRIMYA MANDGLLFGFLGHINNRTQVPVLNLAISGFLSALIALLLFDLQHLVEFMSIG TFLAYTIVSASVILRYRPEKVTSPSNAGTPSSLTSPTEGADSNDCNSVT SAESELLDLSEGTGKLKSRYIWLANFLGSKPGDVVTGSMIYTAGCISL CFLFILISQTYFAPALWDYFVLANVILLLIGSLFVIAHQSPPTGKFRVPM VPVIPALSILFNIGLMFHLSLLTFLRFLVWMVVGMLIYFLYGIHYSKEAAS PNSYSILMATSEAGRGAKWGATLRVNQKSDKVPILNEEDFVH</p>
AmAPC2 (XP_00655 8911.1)	<p>MKLELMDREKGLELFGKFIRTKNVEQLQDDQEKTPPELHPTDSKQKLQ KCLTTLDLTS LGV GSCVGTGMYLVAGMVARSVAGPGVVISFIIAASIFS GACYAEFGVRVPHTTGSAYMYSYVTVGELIAFIIGWNMILEYLIGTSACA CALSACLDALTDGAVSGAIANSVGTIFGRPPDFLAFVITILMMLLMAAGV KKS L V F N N V L N A I N L A I W V F V M T A G M Y Y V D I D N W N E H G G F F P Y D W S G VFTGAATCFYAFIGFDIATGEEATNPKRSIPLAIVSSLIIILTAYVTSSMML TLIVPYDEVDQDSALVEMFGQVGAYKCKYIVAVGALAGLTVSMFGSMFP MPRIVYAMAQDGLIFKLSQVWPITGTPAIATLTSGVCAAMAALLIQLEV LVEMMSIGTLLAYTLVSTCVLILRYQPHSTNLVELLPQSLRTPCRSPTKEN QGNGQAAQSDLAAANSQQRIMVRRVRRCNSSSPDSDDTYGAEEDEVGL GKDDQYLVSDRTENKFYGSVHAAAAASSCGSTHQYPGNTPIIGPPLNYL</p>

	<p>QRRLQAAQYLCPAIFPWVDRGPATEASGRYVMKLVGILYLLIVFDLIVVC GMGHMGFTTLLMFAFLFAIIGILLAISRKPQNRNSVMFMTPGLPFVPAIA VTVNIYLIFKLSILTIVRFTVWMLGFIMYFYYGIKHSTLEERNASDNLEET VSAGNIELTVTDTQKQQQQQPSYTTTDRSIYESQQLDAFGQPVFGSTNF GGTPSQRPVISGQSSLFIDQESFPTWDD</p>
<p>AmAPC3 (XP_00656 0702.1)</p>	<p>MRNTYGTFRMSKSGSIKDGEKGPYDPVPSTDKGNDEIKLEAKMSLLNG ITVIVGSIIGSGIFVSPTGVLKYTGSVNASLLVWTASGIFSTVGAYCYAELG CMIRKSGADYAYIMETFGPFLAFIRLWVECMIVRPCSQAIVALTFSVYVLK PVFPDCAPPDDATRILAACCICILAFINCWDVKWATRVDIFTYAKLLALFI IIFTGAYQLFTGHTEYFTFDNTKTEVTSIALSFYSGLFAYNGWNYLNFHIEE LKDPVKNLPAIAISCVLVTTVYVFANMAFYTTLSPEVLGSEAVAVTFA NRLFGMFAWTIPVFVALSTFGAVNGILLTSSRLFYAGACEGQMPEILTMIQI SRLTPPAVLCMTLLSMLYLCSDDIFALINYVGFATWLSIGVSVLCLPWLR WSQPNSRPIKVNLFPIIYILATLFTIVPMYASPVETGYGCLMILSSIPVY FIFIAWKNKPKFFQKGVGAVTKTLQKMMVVVGPKTK</p>
<p>AmAPC4 (XP_00656 8546.1)</p>	<p>MYEVTVGHDPQTSNGNQSQQQLQSGSWGNGIPETTLVSRIRSNGNSNG WNPITSPFQRQPEQQQLHERKQKEIKSGDLGDDDEDGGGGGGGLEGTDPE ENNSVHLKRRVGLVSGVALIVGTMIGSGIFVSPSGLLVRTGSIGISFLVWTA CGMLSLCGALAYAELGTMNTSSGAEYAYFMDAFGAPPAFLFSWVSTLVL KPSQMAIICLSFAQYAVEAFAADCDPPEEVVKIVALLAIILILLVNCYSVNL ATGVQNAFTAAKLIAILVVIAGGSYKLIQGNTQHLKGAFDTFDGSTVNIG RLATAFYTGLWAYDGNLNYVTEEIKDPSKNLPRSIMIGIPLVTLCYALI NVSYLAVMSPSEMIESEAVAVTFGNRILGVMAWLMPLSVAISTFGSANGT LFAAGRLCFAASREGHLLDCLSYVHVRFTAPAGLIFHSLVAGAMVISGNI DSLIDFFSFTAWIFYGGAMLALLVMRTRPNHPRPYKCPLIIPVLVLGISAY LIIAPIIDKPQIEYLYAAGFILAGMLVYLPFVKYGYVPKFMEGVNAFLQML LEVAPTAADF</p>
<p>AmAPC5 (XP_00657 0076.1)</p>	<p>MASRLWKALSRRRIDENLENKSELARVLGLFDLTALGVGSTLGLGVYVL AGSIKETAGPAVCISFLIAIASGFAGMCYAEFASRVPKAGSAYVYSYVT VGEFIAFIIGWNLILEYIIGTASVARGLSNYLDALIGNVISETLHSLMPISVS FLSEYPDFFAFTVVILLIILSVGVKESILNNIFTVINLMTILIIIIAGSIKADP ANWRISINDIPESEQQHAGSGGFMPFGISGVMIGAACKCFYGFVGFDAVAT TGEEAKNPQRNIPIAIVVSLIILMAYFSISTVLTMMWPYYDQNADAPFPY VFDKIGWPTVKWIVNIGAAFALCTSM LGAMFPLPRILYAMGNDGIIIFKRL ANVHPKTMTPIFGTVVSGLFTGIMTLIFNLQQLIDMMSIGTLLAYTIVAISV LILRYQGKECTSNTQSITPIDGYKLTPMNILKQIVNLQNQKEVTEMSIKVA KYSIAILCVVIFITAFFISYVDTEVFGKNVIESVILILVNILLIIIIARQPVHE TDLAFKVLVPLLPCCSIFINLYLMLQLDAFTWMRFSIWMVIGLTIYFFYGI SHSEQGKKDKIEAEMIKRKYADQVRIVTRF</p>
<p>AmAPC6 (XP_00657 0492.1)</p>	<p>MKLSKIFYWMMFITCYLSFSHALECYVCTDQEGNKEKCLKSTKICEQHQ DTCLTEIKWGSTPYWSQGAKKQYVYSKRCSTKKECERIKRANMDDCTYI WYQDWKCSGCCQGDKNYVVISMIWKLKTLTKMFSRKKEVDYSQDTR LARCLSTDLTALGIGSTLGVGVYVLAGSVSKTIAGPAVIVSFAIAAIA SMF AGLCYAEFGARVPRAGSAYIYSYVTMGEFTAFLIGWTLILEYVIGSASV</p>

	RGLSTYVDALFNNTMRNAFETA AHIDIDLSSYPDFFAFGITLIFSAALAF GAKESSVANNFFTLTNLSVVLV VIIAGSLKANINNWKTKPTCTTENCKY G NGGFMPYGIAGVISGAATCFY GFIGFDCVATTGEEAKDPQKSIPIAIVASLT VVFLSYFGVSTVLT TVLPYFEQNE DAPPELFD RIGWNWAKWLV TIGAIC GLCSSLLGAMFPLPRIIYAMASDGLIFEWMGKVSSRFHTPLMGTF SAGILT GLLAAIFELTQLVNMMSIGTLLAYSIVATCVLILRYE ESEAYQKKGDRDPR TLKFIARQLINANGLNHSTKLTSQIVTYLVV CYVILCICIGITISIFTDEIMN GKITLIVPLTILLLALV VILVFIYLQPTSGKNLAFSVPLVPFLPAFSIIINIYLM MMLDKMTWIRFLIWM TVGLGIYFFYGVWH SKMRKDKHTKLPENGYNE DTWKTNDSSMHK
AmAPC7 (XP_39307 1.3)	MKLELMDREKGLELFGKFIRTKN VESLQDDQ EKTGPEPLHPTDSKQK LQ KCLTTLDLTS LGV GSCVGTGM YLVAGMVAR SVAGPGVVISFIIA IASIFS GACYAEFGVRVPHTTGSAYMYSYVT V GELIAFIIGWNMILEY LIGTSACA CALSA CLDALTDGAVSGAIANSVGTIFGRPPDFLAFVITILMMLLMAAGV KKSLVFNNVLNAINLAIWV FVMTAGMY YVDIDN WNEHGGFFPYDWSG VFTGAATCFYAFIGFDIIATTGEEATNPKRSIPLAIVSSLIIL TAYVTSSMML TLIVPYDEVDQDSALVEMFGQV GAYKCKYIVAVGALAGLTVSMFGSMFP MPRIVYAMAQDGLIFKLSLQVWPITGTPAIATLTSGVCAAMAALLIQLEV LVEMMSIGTLLAYTLVSTCVLILRYQPHSTNLV ELLPQSLRTPCRSPTKEN QGNQVNYGKELRPDQLTTALNSVQAAQSDLAAANSQGRIMVRRVRR C NSSSPDSDDTYGAE EDEVGLGKDDQYLVS DRTENKFGSVHAAAAASSC GSTHQYPGNTPIIGPPLNYLQRR LQAAQYLCPAIFPWVDRGPATEASGRY VMKLVGILYLLIVIFDLIVVCGMGMHGTFTTLLMFAFLFAIIGILLAI SRKP QNRNSVMFMTPGLPFVPAIAVTVNIYLIFKLSILT LVRFTVWMILGFIMYF YYGIKHSTLEERNASDNLEETVSAGNIELT VTD TQKQQQQQQPSYTTDR SIYESQQLDAFGQP VFGSTNFGGTPSQRPVISGQSSLFIDQESFPTWDD
AmAPC8 (XP_39314 4.3)	MASRLWKALSRRRIDENLENKSELARVLGLFDLTALGVG STLGLGVYVL AGSIAKETAGPAVCISFLIAAIASGFAGM CYAEFASRVPKAGSAYVYSYVT VGEFIAFIIGWNLILEYIIGTASVARGLSNYLDALIGNV ISETLHSLMPISVS FLSEYPDFFAFTV VILLIILLSVGVKESSILNNIFTVINLMTIL IIIIAGSIKADP ANWRISINDIPESEQQHAGSGGFMPFGISGVMIGA AAKCFYGFVGFDAVAT TGEEAKNPQRNIPIAIVVSLIILMAYFSISTVLTMMWPYYDQNADAPFPY VFDKIGWPTVKWIVNIGAAFALCTSM LGAMFPLPRILYAMGIMTLIFNLQ QLIDMMSIGTLLAYTIVAISVLILRYQGKECTSNTQSITPIDGYKLT PMNIL KQIVNLQNQKEVTEMSIKVAKYSIAILCVVIFITAFFISYVDTEVFGKNVIE SVILII LVNILLIIIIARQPVHETDLAFKVPLVPLLCCSIFINLYLMLQLDA FTWMRFSIWMVIGLTIYFFY GISHSEQGKKDKIEAEMIKRKYADQVRIVT RF
AmAPC9 (XP_39377 7.2)	MEQVGKKGNEKIALKRELGLFSAVGMIVAVMIGSGIFVSPTSALERSGSV GLCLIVWISCGLLSLLGALAFaelstVVPRSGAEYAYFIEAFSPLHQYAGQI PAFICSWVYVMVLRPTEVAVIMLTF AEYSVQPFSGYLENLSEEW MFRLKK LIAILALGLITYINLTSVKLYVKVQNIFTVCKIVACIFVICGGIWWLCTGHT ELLEKPFHGTTTSAGNVALAFYSGLWAYD GWTSAAIVTEEIQKPEINILRS ILIGVPLITILYVSMNLMYMAALTIPEMVRAPAVAVLWAKKVLPSWLG FVI

	PLGVAISTFGCSLSIQFGVSRLCYVAGREGHVPRVFSFVHIEKMPAAAVA FQGLLTLLYLLTGDIIALIEFASFLTWVFYGFAMLSLIIMRRTKPNASRPYAV PILVPWLILGVSIFLAVTPIVHEPTPKYLFALLFVLLGILVYHTYVYKVKVS SLATKITYLIQVLCLVAPDKED
AmAPC10 (XP_39540 4.2)	MPDKVAPAEKQVLKTAKTVNSDNKAVKLLKELGLLDGVAIIVGIIVGAGI FVSPKGVLENSGSGVQALIVWIFSGVLSLIGALCYAELGTMIPKSGGDYA YISDAFGPLPAFLYLWVALFILVPTGNAITALTFAQYILQPVWHGCIPPYAA VRLAAVITCLLTAINCYNVKWATRVQDIFTGTKIFALLIIMVAGFWWLCM GHTENFRHPMNGTNTQPGYIALAIYSGLFSYSGWNYLNFVTEELKDPYK NLPKAICISLPLVTIYVLANIAYFVVLQDEILASNAVAVTFSDKLLGVMS WIMPVVFACSTFGALNGAIFASSRLFFVGARNHLPAAIALINVQNLTPTP SLIFLCIITLALLIIEDVYVLIYYVSFVEALFTTLSVSGLLWLRYSKPNRVRP IKVSILLPIIFFIICAFVIFPCYVSPWEVGVGVIIIISGIPMYLIFIYWEKKPK WLIQSSHNFNMICAKLFMCVQEERSD
ApAPC1 (ACYPI088 688-PA)	MRNSLSNHTLYQTLCRKKTFTEDVEPGKEKLRVLNIFDLTALGIGATLG CGVYVLAGTVAKSIAGPAVVL SFIVAAIVSSFSGVCYAEFAGRVPKAGSAY IYSYVTVGEFIAFFIGWTLYIEHTIGTASVAKAMTNYLDALLGDPQKRYFK KHFPMHVDFLGEYPDFASFFFVMFIALIVAWGVKKSSTLNKAFTLLNLLT LGTVVVSGFFLG
ApAPC2 (ACYPI083 161-PA)	MYTCFIFSFEELTTAIPHAGGPFAYSRRRAFGETGGLIAGLATLIEFVFAPPAI AMAIGAYLNVQYPDLNPKTAAVGAYLVFMTLNILGVKLAAMFELVVTVL AVLELLVFMGVVSPGFSIANFAANGWAGSDHFGMPALSGIFAAIPFAIWWF LAIEGAAMAAEEAKDPKRTIPKAYITGILTLVLAIGVMLLAGGAGDWR KLSNDINDPLPQAMKMIVGEHSNWMHMLVWIGLFGVASFHGILGYSRQ FFALARAGYLPQGLAKLSRFQTPHRAIIAGGVIGIAAIYSDGLINLQGMTL TAAMITMAVFGAIVMYLMSMLSFLKLRRTAPDMERSFRAPGYPIIPGIALV LSLVCLIAMLWFNPVIGGLFVGIMLVGYIYFLATKTQRQNAPQDAMLMG E
ApAPC3 (ACYPI003 923-PA)	MAVGKKNRKKTMAGVVRESSMLDRVLT TTDLTALGVGSTIGVGVYVL PGALSKYVAGPAVVV SFFIAAVASVFAGLCYAELSSRVPRAGSAYSAYIA VGELAAFIVGWNLLLEYTIGGASIARGMSLYIDALTNKTMETAFRGLYEIE LPYLSEYFDFFAMFIVLLFSVALACGLKDSVRLNNLFTLLNCAIMVIVIVG GSFHIDFKNWSLPKAEVPNWAGEGGFWPYGLQGALQGAATCFYGYVGF DCIAASGEEVKNPQKSLPLAIVLSL FIVFLAYSGVSAVLTLMIPYYAQDAN MPLSHAFDVIGWTSWKWIIGVGAVFGMCACMFGSMYPLPRILYAMSNDG LIFKSLGKVHPRFKTPFFGTIFAGIITGFFAALLNLQQLVDMMTIGTLLVYV MVAVCVLYTRYQEQSDMDYDILADEYIESTALVTIKVQHTKKQILKQLFN FHKFVRANSLSSYVASLQTTCTIVCLPLGLYLSHWYELNSTHWIIVQVLV GVMILQLVSIAMQPTSKTPVAFKVPLVPLTPALSIFINIYLMFFFDIYTWTK FIIWMIIGFAIYFGYGITHSKENNPEINIVNSSQSKTSLNID
ApAPC4 (ACYPI006 356-PA)	MLRNLQTSHGFNNDTND DDDGGDGDGETAGNGKNMLARKLSTKGDT LYLERRVGLFSGVALIVGTMIGSGIFVSPTG LLIRTGSIGLSFVIWAACGAM SLLGALAYAELGTMNPSSGA EYAYLMDAFGPMPAFLFSWISTLILKPSQV AIICLSFAKYAVEAFVDECGSSDFVVKIVAVLSILIITYINCYSVNLATGVQN

	AFTAAKLVAVFVVVAGGVYKIIQGRTEHFRNYFENTTTSMGDVATAFYSG LWAYDGNLNLNYVTEEIKNPSKNIPKAIYISIPLVTCYLLVNVAYLTIMS PDEIVRNEAVAVTFGIRALGSIWVPLSITISTFGSANGTLFAAGRLCFAAS REGHLMHVLSYIHIKLTMPMSIIFHSIITIVMVASGTINSLIDFFSFTAWIFY GSAMLALLVMRYTRPDVPRPYKVPIIPLIIFVISLYLVVAPIIDKPQVEYLY SVMFMIAGMIFYVPFVRLGYKFRIIDRWTVIIQLLLQVAPTKLVLP
ApAPC5 (ACYPI279 09-PA)	MWPYYLQDSEAPFPYIYQQLEWPIVEWIVTIGAVFALCTNMIGTLFPLPRI LYSMASDGLLFHIFSKIDPKTKTPFWGTFICGAFATLSSIFNLQQLMDMM SIGTLMVYTLVCTCVLILRFRDDDESEQCNVRDNADRCAPLMGQLSSIFN GSNLQTTKNTGRISVIIIYRICHARAGDGSTCSPDVTVPKKNAAHGR GIEPASVCVATDALVRSATPSPLFIFYVTVLIHYD
ApAPC6 (ACYPI005 118-PA)	MAEFRNYKNDQSLIKTMLRRKESDLSTEPTKNQLSRVLGLVDLISLGVG STLGLGAYVLAGEVAVKFTGPAVVLVSAFAAVASALSGLCYAEFASRVPKA GSAYAFSYVGIGEIVAFLLIGWDLILEYSIGCASARALS GHIDKPF GHPMRE YLKETFPMHVDFLAPYPDFFSFTSIIMLTFLIAWGMRESSFLNKIFTVVNLL TVITVVLTGLIKVDTYNWNIPKEDIPLDAKGGEGGFLPFGWSGVFVGAAT CFYGFVGFDAIATTGEEAKRPTKDIPLAIVISLSIITLSYCSVAIILT LIW PYY KQDPEAPPHIYQELGWQALEWIVTIGAVFALCTNMIGTLFPLPRILYSMA SDGLLFHIFSKVDSKTKTPFWGTLCGTFAILSSLFDLQQLMNMMSIGTL MAYSLVCICVLVLRVTNDDEECKVRDNGRFRVSLMRLSSSFNLNSQI TTKNTGRTSVKIILVYLVAICFCSSVSIAQTEGKFNMITAACS SVGVLLL VLCYLSRQPQSTNRPTFHVPCVPFVPCLSVVLNIYLMTQLDTSTWIRFT VWVFIGLLIYLFYGLRNSVERLNQRRILDETYMKQIRYEIQVY
ApAPC7 (ACYPI000 537-PA)	MDGPWYKSADSFTWALTRKKTDELSREKLN RVLT LFDLTALGTGATLGC GVYVLAGAVAKSIAGPGVLSFVIAAVVSAFSGLCYAELAGRVPKAGSSY IYSYVAVGEFTAFVIGWNLIIIEYLIGTACAAMSNYCDYLLGNPQKRYM TEYFPIHISFLSNYPDFASFTMIVIA
ApAPC8 (ACYPI061 470-PA)	MDGLKKRLVQSSVCFSSIGDLTIGNRYPITKLCNQDTQYGRVLC TLIDN NDGDKLINVYLPKSIKLNDEILEFNRSVKMNTTSENKIDSMSTKKR GSVGLKKQLGLLEGVAIILGIIFGSGIFISPSGVMNEAGSVGVS LAVWMC GILSMIGALCYAELGTSIPRSGGDYTYLFEAYGPLPAFLYLWDAMLVFLS SICINIGFITFINCWNVKATTKIQNVFMFTKISALVLIIVCGGVYLHSNGFSK FTNPWQGSVTDPGKLAVSVYSGIFSYSGWNFLNFMTEELKNPYVNL PRA IYISMPLVTIIVLANVAYLAVLTPHDMVTTNAIAVTFSHLAMGSFEWVMP LMVALSAFGGLCVNIMTSSRICCVGARYGHFPTFLSYINVERYTPTPALVF LNILSLFMLFTSDVNILITYSSIVEAFTMLS VSSVLWNRWKRPNTNRPIK VSLWIPITYVIVSLFLIVLPCYVRPFQVGMGVGITLLGIPVYYVCVWVWTK PAWFQNSLKHVTFTIQKFFVVAKEEKADGVWE
ApAPC9 (ACYPI005 006-PA)	AASVARAWSGFFDSMFDNVIRNTTISVLGELHETLFGKYPDVFAFFVCLL HACILGVGVKTSSYMNSFLTLVNLGVMVAVIVVAGYYYGNSDNWSSDGG FMPYGTGIIAGAATCFYAYVGFDSIATSGEEAKDPAYSIPVATIAMSVC TGYVLVSGALTFLVPYWSIVPDAAFPAAFAGLDLNLWIKYLVSVGALCGM TTTLFGSLYSLPRCIYAMADDGLVFKFLAKVNKKTQIPIINLAISFLCALI ALFFDLEKLVFMSIGTLLAYTIVSASVIILRYRPTNRGLVRDSSSLELPTS

	QADSFEMDMGGRLKPSYKFLEPFGEFEPGYIVCVSIGWFTSSTVVLVCVY IQYWFNIQHVSUIDGIVLTAALGTDLILCQFLIEAHEQNSTELPFMVPVPLI PSLSIVCNIVLMTNLNLLTWIRFFIWMVIGLLIYFLYGMHHSKENDVTSYS VLLSSEAGKTPWGAINKSRKRVKTEDDRKPIIDNEELADNGYYH
ApAPC10 (ACYPI009 985-PA)	MSVPKLPDFRRDGLALITRMVVRTKDLDDLQGESSPTGRFDPHHPKTKL KCLNTIDLTSGLVGSCLGTGMVYVVTGLVARRFAGPAVILSFIIAAVASLFSG ACYAEFGVRVPNTSGSAYMYSYVTVGEFIAFLIGWNMVLEYLIGTSACA CALSASLDSLNGAISASVQNYVGFGLKPDILAAAGITLLMMVLLAAGVK KSLVFNHLMNAINLAAWVFLMSAGLFYVNLNWNWTKNDGFLPNGWGGV FKGAATCFYAFIGFDIIATTGEEAHNPKKSIPLAIMASLVILVAYVSSSIILTL IVPYTKIDENAALLDMFVQVGAPRCQMVVAAGAMAGLLVSMFGSMFPM PRIIYSMAQDGLLFSLSQIFPLTGPVVATVLSGVASAVAALVINLDTLIE MMSIGTLFAYTLVSTCVLILRYQPQTSTVIHFFPETMRSPMNAKQIVTNG RVNFVVQDDQKYAYTNQGYGNQTSFYQTQLPLPQQIIPSHQSQRIMVRK VTRSSPDSDDTYFGDDSEGRDDQYLVSDRCESKFYGSVHGGSTAGSTA AAGGFSAAANITRSIKAATYLCPAIFPWVDMGPATEESGMVVLKLVGVF YVLIIVFDVLLVFSSESSTFVYILLYALLIAVIAVLGAISRKPQNKQILVFKT PWVPFVPSFSIAVNLYLIFQLSSMTLLRIVVWVSIGLFFVYFYGIKHSTLEP RVDEDERIELKMKSQTMTPKQNNQPPAPAKTSANTTSTANTTTTTTATA STRVASSTTTAAVVDENKTEPKRPTNLEPLPASNDSNLFVSPSAFPKWED
ApAPC11 (ACYPI009 467-PA)	MNTATPENAKITDSIPEETGDRVRLKKQLGLLEGVAILGIIFGSGIFISPTG VMIHAGSVGVSLTVWIMCGMLSMIGALCYAELGTSIPRSGGDYTYLFEG FGPLPAFLYLWDAMLVFPVPTNAIMGLTFANYVIKPFPECDNPEQAVRLL AAAVICFITFINCWNVKATTKVQNVFMFTKISALVLIIVCGGVYMYNSGFS KFMNPWQGSVTDPGRLAVSVYSYSGIYSYSGWNYLNFMTTEELKNPYVNL RAIYISMPLVTIIVLANVAYLAVLTPHDMETTKAIAVTFGHFAMGSFEWI MPLMVALSAFGGLCVHIMTSSRMCVFGARYGHFPTFLSYINVERYTPTPS LVFLNILSLLMLFTSDVEMLITYSSIVEAFFTMLS VSSVLWNRWKRPNINR PIKVSLWIPITYVILSLFLIVLPCYVKPFVGMGVGITVVGIPVYYLVCVW KTKPVWFQNSLKHVTFTIQKLFVSAKEEKSEDIWE
ApAPC12 (ACYPI005 156-PA)	MTGSWTKSVYQKLSRKKTYVEEIGVEKDKFKRVLNVVDLTAALGTGSL GCGVYVLAGTVAKSVAGPAVVLFSILAATVSSFSGVCYAEFASRVPKAGS AYIYSYVAVGEFIAFVIGWNLLLEHTIGTAAVAKAMSNYLDLSDLPQKR FMKKHFPIHMDFLGEYPDVASFLFIMSIALVVAWGVRKSSTLNNLFTTLN LVTVCTVIVSGFYFANLSNWFIDKNDIPPVNGGNGGFLPFGWTGMIAG AARCFYGFIFGDSISSTGEETKNPKKTIPLAIVLTLFNVTVAYSSVASVTL MWPYYDQDPNAPLPVIYENLGMVPLKYLVTGGAVFALFTTLIGCLFPIPRI LYAMSSDGLLFSFLATINEKTKTPFIASIIICGVCAGLLSTIFNLEQLVDMASI GTLQSYMIVSVCVILRYRNTNLYSRDSDSPEEYTIAMWLNVSANVNTN RETQYVSRILITIFSFTACIFCICVVNWDSHQGTAQLILGFIICLSIILLVVML MLNRPQAIETLPFKVPFVFPVCLSIVLNLYLMMVLNVKTVIRFSVWL VGLLIYGFYGLKHSIEGVKEQTTKVEEGKNEQKPSN
ApAPC13 (ACYPI003)	MRNSLSNHTLYQTLRCKKTFTEDVEPGKEKLRVLNIFDLTALGIGATLG CGVYVLAGTVAKSIAGPAVVLFSIVAAIVSSFSGVCYAEFAGRVPKAGSAY

240-PA)	IYSYVTVGEFIAFFIGWTLYIEHTIGTASVAKAMTNYLDALLGDPQKRYFK KHFPMHVDFLGEYPDFASFFFVFMFIALIVAWGVKKSSTLNKAFTLLNLLT LGTVVVSGFFLGKLSNWFIPKSEIPPGVDGGDGGFSPFGWNGIAGAARC FYGFIGFDSIATTGEETKDPKRTIPLAIIILSLFFVTLAYSSVASVLTLMWPYY DQDPDAPLPVIYENMGMPPIIKYMVTCGAVFALMTTLLGCLFPIPRILYAMS SDGLLFKCLSTINEKTKTPVLATMICGIGTGLLSSMFNLEQLVEMTSIGTL MSYLMVCVCILILRYKNNNSVSQDLNSEVHIIYKWWNASNTGLTNTDS QYVSRVLILTYTFAAFVFCICMTNVHYFEGSLQLSLTIIIGISVATLLISLLML CRLPQAVENLSFRVPFVPLVPCLSILLNLYLMMELNIKTWMRFGVGIVVG LLIYVFGVHNSLEGFKQQAIDKEHKQDPKISN
ApAPC14 (ACYPI003 523-PA)	MIHSWSGKTLYQSLSRKKTAFATENKQEKDKLKRVLTFIDLTALGIGATLGS GVYVLAGTVAKSVAGPAVLSFIVAIVSSFAGVCYAEFAGRVPKAGSAYI YSYVAVGEFIAFIIGWNMFIEHTIGTASAAKAMTNYLDSLLGDPQKRYMI ARFPIHMQYMGEYPDVAAFLFLMFIALVMAWGVKKSSTLNTVFTAFNLL TVGTVIVSGLFFVKISNWNIPKSEIPPGVDGGNGGFAPFGWGGIAGAARC FYGFIGFESISTTGEETKNPKKTIPLAIVLTLVFTSAYSIVASVLTMMWPY YDQDANAPFPVIYENLGLPVIKYTVTCGAVFALFTSLLGCLFPTPRILYAM SCDGLLFEFLSIVNERTKTPVIATMICGVGAGILSSIFNLEQLVDMTSIGTLI TYLIVCICLLVLRDRDTNTAIQDIDSNPDDYNIFKWYSLFNTKVTNLGTQY ISRVLILITYTFSACVFCISMVNINCYDGAFYFPLIVVIAISITVSLLSMLMLH RLPQAIENLAFRVPLVPFIPCMSIILNLYLMMELSIKTWIRFGVGLVGLVFI YAFYGIHHSLEGSKQRAVKNEENKNTPRISC
ApAPC15 (ACYPI008 904-PA)	MMKLRETLYQVLFRRKNEDDIDDPDKEKLARVLNLVDLTALGVGSTLGV GVYVLAGNVARIEAGPAVLSFVLAFAFASALAGLCYAEFAARVPRAGSA YVYSYVGVGEFVAFVIGWNLILEYVIGTASVAKAFSNYIDALLDYPVKTT MTYLFPMNVSFLADYDPVLSFSLVILLSIILAWGVRESTMINNVFTVVNLL TVFTVVVSGLFKVNLYNWSIPKQDIPKSAKGGEGGFMPFGWAGVTAGA AKCFYGFIFGDSVATTGEEAKKPKRDIPLAIIILSLSITFAYCCISSVLTLMW PYYDQDIDAPFPYVYDKLGWTTLMKIVSSGAIFAMFASLLASMFSPRIL MTMAEDGLMFSMFSIIHPKFKTPLLATLLSGLLAGIITALLNLEQLMNM SIGTLLAYTIVCICVLILRYKNDPDSDEFVKNQVIDEPETSSGFFKVVDKYF NLSNVDNANKETERVATTITVLYICTSVLFSFVTVQHECVATNHPWCDGN SSAFQPGCVLNTNATTLFKQGCIENTIATYTSAILAIGLLLLLLLLLTRQPQ SNKKLSFKVPLVPLIPCISILMNVYLMMKLDIITWIRFSIWLTIGLFIYVLYG MNNSAEGIKRKGEPNNSRSSSAEPIHQISSINL
ApAPC16 (ACYPI000 584-PA)	MMDDPWYKSTDSTLWALTRKKTDSDDPSKEKLNRVLTFFDLTALCTGST LGCGVYVLAGAVAKSIAGPAVLSFAIAAVVSAFSGLCYAEFAGRVPKAG SAYIYSYVAVGEFTAFVIGWNLIEHLIGTAAMAKAMSNYCDSSLGDPQR RYMTEYFPIHISFLADYPDLAFAFVIVVISLLVAWGVRESSLTNNIFTALNL ITICIVIVTGFYKANYSNWSIPKSEIPPEAKGGEGGFMPFGWVGAAGAAK CFYGFVGFDSIATTGEETKNPKRDIPLAIVAALFLSTIAYCGVATVLTLMW PYYLQDPHAPLRALYENLNMPTLKIIVSVGAIFALCTSLLGAIFPLPRILYA MASDGLIFKFLSNINATTKTPLISTIICGVFAGTLSALFNLEQLIDMASIGTL QAYTIVCICVLILRYTDNPSIHDNTVKSIGITVFTWLNLSNAKVPNSDTQ

	YVSRALIFFSVCTFVFAISLANMESHGNTNRNLIINIINVTSLLVLLVTLFML GRLPTAVEDLSFKVPLVPIIPCLSIVLNVYLMMELEYKTWIRFIVGLISGLLI YLFYGIGHSLEGNKQKIQLNTIQMNPCLSS
ApAPC17 (ACYPI002 633-PA)	MDGSWWNSREKLIQVMSRRKSDDDILIDQPEKKKLARVLNLADLTALGV GSTLGVG VYVLAGSVGKTDAGPAVVLSFILAAIASAFAGLCYAEFAARVP KAGSAYVYSYVGVGEFVAFVIGWNLILEYVIGTASVAKGFSNYMDALLD YPMKRTMTNLFPINVSFLSEYPDFLSFSIVLLLSILLSWGVRESTMINNVFT VVNLLTVATVVITGLFKVNWYNWNIPKQDIPKNVRGGEGGFMPFGWAG VTTGAAKCFYGFIFD VVATTGEEAKKPKRDIPLAIIILSLIITFAYCCISAV LTLMW PYYKQDANAPFPYVYDQLGWTIKWIVSSAAIFALFTSLIGSLFP LPRILYAMSCDGLLFRMFSDIHPKYQTPLLATLLSGLLAGIMSAIFNLEQLI DMMSIGTLLAYSIVCICV LVLRYRNDSDVEFVIKGNDELETS GFVETVIKT VVKYFNLSNIKYANEETESVAMIITMWFICTSALFCFITVKQDGAQNSSD VATYSSAILVIGLLLLLLLLLARQPQSTKELSFKVPLVPFIPCMSILLNIYLM KLDIHTWIRFGIWLLIGLFIYVFYGMKHSVEGRKQLKEPKKRPSSAAAVH PISIKL
ApAPC18 (ACYPI005 720-PA)	MGVCRKEDGSAVEADVAPAEDDGIELKPKMSLLNGVTVIVGSIIGSGIFIS PTGVLENTGSVNASLVVWVLSGVFSMVGAYCYAELGCMISKSGADYAYI METFGPFIAFMRLWVECMIVRPCSQAIVALTFSLYVLKPMYTD CDPPEEST RLLAACCVLLTFINCWDVKWATR VQDIFTYAKLLALMVIITGVYQLYA GHTEHFTFVNTKTEVTSIALSFYSGLFAYNGWNYLNFVIEELKDIRNLPR AIAISCILVTVVYVFTNIAFYTTLS PQEVL TSEAVAVTFADRLYGPMAWTIP VFVALSTFGAVNGILLTSSRLFYAGACEGQMPQILTMIQINRLTPPAVICIC LLSLIYLQISNIYALINYVGFATWLSIGVSVLCIPVLRFTQPDLERPIKVNMF FPVYIGATL FVTIPIIASPVETGYGCLMILTSIPVYGVFIFWKNKPMIFHKI VGCLTRYLQILLMVTTSKTPAKV
ApAPC19 (ACYPI008 323-PA)	MHVDSMKCSDYRLMIGITKPKKNFEAAEHLAILHQFNGCTENNRLKIP LLGPVTQFKAIGNCIGVENRGPTT PFITLKNNSVLNTFWLECD SFSFDCTR NYIYYNVNQSILQYDLLSSMLFEVEVIQKIAVNAISNLFPLTHLNDRYLLV KSILPNTYEIFDVKEHVSISIRLTPGYKLVHVG YILFNTFKLHKDSSMKM FGDSVTQLCETVERETLSQILFRKNEDKLDQPDNKKLARVLNLFDLTSL GVGSTLGVG VYVLAGIVANTLAGPATVLSFVLA AFAS AISGLCYAEFAAR VTRAGSAYVYSYVGVGEFVAYMIGLNLILEYVIGTASVAKALS NYIDALL GYPIRTCMMYLLPMNVSFLASYPDILSFLVLLLSFLLSWGVRESAMINN LFTIVNLLTVGTVVVSGLFKINFHNWNIPKQDIPMSANGGEGGFMPFGWT GVTMGAACFYGFIFD SIATTGEEAKNPKRDIPLAIIILSLIITFAYCCTSS VLTLMWPYYDQDIDAPFPYVYNQLGWTSMKIIVSSGAIFAMFASLLASM FSMPRILMTMAEDGLMFSMFSDTHPTLKTPTATLV SGLFAGIITMFLNL DQLMNMMSIGTLLAYTIVSVCVLLLR YRNDPNDDKFVINQGDDEPETGG FVKMVERYLNLSNVDNCNEDTERVATTLTVLYFCTSALFSFVTAQQECVK TTQQWCDEDDR NATVFQPGCVVNTN NATPNFEQECIRNSIAMYTSVIL AIGLVLLTYLLSRQPQSMKLSFKVPLVPLTPCISILLNFYLMMLDQNTW IRFSIWMII GIFYVFYGMNHSVEGLKRKGEPKISQSSSVELKTSPPSSAEPE YEYYTTHL

<p>ApAPC20 (ACYPI001 378-PA)</p>	<p>MTSIPKNVKLRRELGLFSVAVCLIIISVMLGSGIFVSPANALKNTGSMCLV IWMSCGLLSLLGAMSYAELGTVVNKSGGEFSFYQSAFADMHKFWGPLPS FIYSWVSIMYVRPAEVAIIILTFAEYFIRPFSILSSMTPETEHTVKKTVSILAL GIITFINYTSVKCFIKIQNVFTVCKVTACIVVIGGGVYQLYQGNTKNLMTG FEGTTLSDITLPIAFYSGLWAYDGTATTVVSEEIKNPRRNILLSILLAVPF VTMIYVLMNVSYLTVLSVAEMTSVQAVAVEFGTRALGSFSFIPLGVATAT FGCALSVQFGITRLCFAASREGQMLEVFSYVSVKCLTPAPAVVLQGLLTLI CLLCGDIVVLIEFASFLVWMFYGISMAALLVMRYTKRDVKRPFKVPPIIF VLIVSTVLFITPILNDPKPQFLIGLVFILSAFLIYIPFVYQKKRLSIVDNFTKFI QVLMVVVPPEKDEEDAENCNVKDNEGETEAPMIAAVV</p>
<p>ApAPC21 (ACYPI084 217-PA)</p>	<p>MVGAGIYVLIGTVAKEMAGPAIILSFMLAGAAASMLAALCYAEFGTRIPKA GSAYVYTYVSVGEFWAFVIGWNIILEHMIGNNFRRARLITNIATTQRSFTG PELGGACLARVVV</p>
<p>BmAPC1 (XP_00492 4096.1)</p>	<p>MSAQKAEISDRPETLSRQHSECGSAVKKLRELGLFSAVNLILGVMIGSGIF VSPASALEYSGSVALCLIIWTVSGIISLLGALSFAELGTVVGKSGAEYAYFQ EAFGKIHKFWGPLPSFSCAWIYVMILRPAEVAIVVMTFAEYAIQPITIDVHP DYKDNAIKLASLAALFIMTYINITSVKLFVQVQNVFVGVCKVLACLVVIGG GIYEIAKGNNTSHLNKGFEGSTTNPGSIALSLYYGLWAYDGWNSVTVVTEE IINPGVNVPLSISIAVPLITALYVFMNVAYMTVLSYAEMTSGTAVAVAFGAR VLGPFSEFIMPLGVAVATFGCAMSQVQFVTRVCYTAARGGHMLELFSYVNI KRLTPAPAVAFQAFLLTAIFISVGNIKTLIQFASWFLWFFYGLAMVALLVLRK TQAAKPRPYRVPTPIPVFVLIVAIFLSVLPIVEDPSVKYLMAIGFILLGVVV YTVFVYYKRTPSALIRKLTFTVQILFESVPPSKDQDD</p>
<p>BmAPC2 (XP_00492 4956.1)</p>	<p>MVEERIKMRKQLGLLEGVAIILGIIFGSGIFISPKEVLEKTGSVWSALIVWA ACGVLATLGAMSYAELGTTLAQSGGDYHYINEAYGPLPAFLYLWDANFV FVPSTNAIMALTFTNNVVEPLFPNCPVNHISRKLIAASTICILTFINAYDIKF TTRIQNVFMFTKIMALVIIIIGGIVWILRGGTEHFENGWEGTKTSAAEWSV AFYSGIFSYSYSGWSYLNFMTEELRDPYVNLPRAIYISLPLVTVIYLLANMSY LAVLGPVGVSTEAIAVDFADHALGWFKWAMPTLVAVAILGGLSVHIMTS SRMCFAGARNGHMPELLAHINVKCMSPMPSLVFLMLMSLLMLIPNNLTS LITYCTVVESFFTTLSCSAVLWLRYPKPELHRPIQVQLWIPVLFVVISTMLL VVPVISEPFAVLAGAGMTLAGVPVYLCLVRTTPSPIKRLSVRFTYFCQKIF LCVVEDKEE</p>
<p>BmAPC3 (XP_00492 5382.1)</p>	<p>MSYPDENIGRNYESIHFGRDSSVRRSFENGGIKAGATHAARLAYQVLS RRKVAEEGAARLARVLTAFDLTALGVGSTLGVGVYVLAGDVAKNYAGPA VVISFLLAAVASVFAGLCYAEFGARVPKAGSAYVYSYVCVGEFIAFIIGWN LILEYIIGAASVVKALSEYLDSSLNKAISSHLEAALPIDSPHLADYPDVFAF SVIMAFSVALSFGVKESTKFNNVCTAINLCVVLFVIVSGSLKADTSNWRIP ESEVPKDEGRSYGTGGFAPYGLAGIIRGAAVCFYGFIFGDCVATAGEEARR PQRSIPAAVAGSLLVFLAYCGVSCVLTLLVLPYYLQDEKAPFPFVYDRLGC PWAKYAVSVGAICALCSSLMGAVFPLPRIIYAMASDGLLFRWLGRVNEKY QTPLVGTITAGFLTGTLAMIFKLEQLIHMMSIGTLLAYSMVASCVLLLRYE ASPQRAGAERAAPSRRTATTVTVLVTLYGIWCFLMMWCVNSYGDRVLE GHGGYTALLLLATALVVATLCCISRQPVSEKKLAFSVPLVPWLPGLSILIN</p>

	YLMLNLDYMTWVRFVWVAGLVYFSGMWNSTERRRTMDSIQLADQ IIDGHTALLNHSGLTHALG
BmAPC4 (XP_00492 5398.1)	MSKIFAALRRCKLDDNDNTTQLSRCLGLFDLTS LGVGSTLGLGVYVLA GAVAKTVAGPAVTL SFLVA AIASAFAGLCYAEFASRVPKAGSAYIYSYVSV GEFIAFTIGWNLILEYAIGTASVAKGMAVYIDTLFNNTMARTMTAAAPINV SFLADYPDFFAFGLVILITLLLIGVSESTKLNNVFTALNMTTVIIVVAGA IKSNPANWNIKLADIPPEYVSQAGEGGFMPWGVAGVMAGAAKCFGFV GFDCVATTGEEAKNPKRDIPLSIVLSLIIIFLSYFSIATVLTMMLPYYLQDAE APFPYVFEQANLPVIKWIWTVGAIFALCT SLLGAMFPLPRVLYAMASDGV LFRPLAAIEPRTKTPLLATAISGFLSAIMAAMFNLNQLIDMMSIGTLLAYTI VATSVLILRYEEEDVSVSTEK VSTSAGGLAAALRQGCNLLGLKYPTQLSS TIAKTTIALFFVVALAACVFRVGVDE VGGAVVGAALGAALVALLVLY RQPTNNVTHLSFKVPLVPLVPYLSVCMNVYLMVQLDYQTWVRFIWLVI GYLIYFFYGIRNSSLNAWPPAGKLGDKDKTQVVTKF
BmAPC5 (XP_00492 5399.1)	MGCGKIFATLRRCKKIDYDDDTTQLSRCLGLFDLTS LGVGSTLGLGVYVLA AGAVAKTVAGPAVAISFLVA AISSVFAGLCYAEFASRVPKAGSGYNYSYVS VGEFIAFTIGWNLILEYAIGTASVAKGMAVYIDTLFNNTMAKTVTAATPIN VSFLADYPDFFAFGLVFLVTILLIGVNESAKMNNVFTALNVLTVIVVVVA GAVKSNPANWNIKLADIPPEYVSQAGEGGFMPWGVAGVMAGAAKCFGF FVGFDCVATTGEEAKNPKRDIPLSIVLSLIIIFLSYFSIATVLTMMLPYYMQ DAEAPFPYVFEQVNLVPVIKWIWTVGAIFALCT SLLGTMFPLPRVLYAMAC DGV LFRPLAAIHPKTKTPLLATAISGFLSAIMAAMFNLKQLIDMVSIGTLL AYTIVATSVLILRYEEEDVSVGTEKISARGRGVLAVLGQGCNLLGLKNPT QLSSTIAKITIAVLFVVALATCVLSVDGGAVAGAILGAILVLLVLYRQP TNDVSHLSFKVPLVPLVPYLSVCMNVYLMVQLDYQTWVRFIWLIIGYLI YFLYGIRNSSLNSSQPAGKVDDKDKSQVVTKF
BmAPC6 (XP_00492 8535.1)	MHHNEQPTGNACNGSTREGGLVWRGCSASCD AEDGTTGAFDDGNSNP GDKLEGS DAAPDDPVHLKRRVGLFSGVALIVGTMIGSGIFVSPSGLLART GSVGISFIIWMACGLLSLLGALAYAELGTMNTSSGA EYAYFMDAFGGPPA FLFSWVSTLVLKPSQMAIICLSFAKYAVEPFVAECEPPDSLVKLVAVISIVMI LAVNCYSVNLATNVQNIFTA AKLVAIAIIVCGGAYKLILGNTRHLQEPNEA SSKATLGNIATAFYTGLWAYDGNLNYVTEEIKNPSKNLPLSIIIGIPLVT LCYALVNVSYLAVMSVSEMADSEAVAVTFGNRLLGPMAWLMPLAVTIST FGSANGTLFVAGRLCFAASREGHLLDILSYVHVRRTF PAPGLIFHSLIAVA MVLYGTIDSLIDFFSFTAWIFYGGAMLALIVMRYTKPHAPRPYKVPIIPYI VLFVSAYLVVAPILDKPQWEYMYAAAFILGGLLVYLPFVKWGYSLPFMD KITVFLQMVLEVVPSTTFEY
BmAPC7 (XP_00493 0971.1)	MGEESQAGDGKVVLKRKITLFNGVGHIGTIIGSGIFISPAGVYLYTGSVAA SLIIWLASGLLSTLGALCYAELGTSITRSGGDYAYIYTAFGPLPAFLRLWIA LLIIRPTTQAIVALTFGNYVVKPFPECDPPENAVRLLAAVCLCVLTAINCIS VRWTMRIQDVFTTSKLLALVVIISGLYICIGNTQNFENAFAGEYSAGNI ALAFYSGLFAFGGWNYLNFVTEELQDPYKNLPRAIWIALPLVTIIVMAN LAYFAVVTKMEMMANPAVAAIFGDRLFNGNSWVIVFVALSTFGGVNGV LFTSARLFATGAQEGHMPAFFSLFHVDKQTPISLIFTCCFSLMLTTSNVF

	ALINYYSQILWLSVGASVVGMLWLRRTKPDLPRIKVNIVIPYIFLIAIACL VIIPAIVQPKDTAIGIVILLSGIPVYYLVCVKWQRKPEAYHSFSGGILRFLQKT CSCIYLDSTEKLSSES
BmAPC8 (XP_00493 0975.1)	MAKVADVDGLAPKAIENEVESSDGVEKGGVRLKKELSLMNGVAIIV GVIVGSGIFVSPSLALKHAGSKGMALIVWVLSGFLSMIGALCYAELGTMI PKSGGDYAYIGEAFGLPAFLYLWVALFILVPTGNAITALTFAENILKPLWP VCNPPVVAVNLIAASITCFLTIINCYNVWVTRVQDSFTAACKVLALLVTF ASLVYLFSGHTENLQYMMMEKTTTDPGEIAIAFYTGFLFSYSGWNYLNFVT EELKDPYKNLPRAICISMPVVTLVYTLTNVAYFAVLSSDEILSSSAVAVTFS EKILKMMSWIMPLFVALCTFGSLNGAIYTSRLLFFVGARNHPLAISLID IKRLTPVPSLIFMCLVTLTLLSNDIEALMVYVTAVEALFTLCSVTGLLWM RYTRPRLQRPVSLVLPAILITCTFIVICSCFKYPKHVIGVAFIALGVPIY MIFIKWQNKPNWILTACNSFNLACSKLFLCLPEDCKEL
BmAPC9 (XP_00493 2101.1)	MPGARHKILGHVLSGFCHKMNRCKPLHGDSMDTPLNRCLTTFDITLLGV GHMVGAGIYVLTGTVAKSMAGPSTALSFLAGITSTLAALCYAEFGTRIP RAGSAYAYTYVSIGEFWAFIIGWNIVLEYMIGAASVARAWSGYLDLILHG AISNATVALTGELHETLLSRYPDILAFILCLAASLILAAGVKTSAYINNGLTI LNLLVISLVIFLGFYADISNWSEKNGGFMPFGFSGVLAGAATCFYAFVGF DSISASSEAKDPSRSIPVATVLSMAVAFGYILVAMALTMVPYNTINPD AALPAALGAVHADWAKYAVAVGAVCGMTTLLGSMFSLPRCLYAMSAD GLLFGFFSDISNKAQIPVANLAISGLSSAFIALFDLEKLVFMSIGTLLAYT IVSAAVILRYRPTPTTEDKGFVVPQLDSPCDREDSSATGTPATDGGSSSE MFETLTVGRLRPQFAWLEPLVGGRAPGAAVTCSVYFTTIATAALCAHNHF LVEPAGLWVLLPDFVLIFIIISCLVIIWAHQSPTRLPFRVPWVPLPAASV MLNVELMINLNALTWARFAMWMTFGLLVYFLYGIHHSKLGEGVAGLLSS GGNNSDWGAVEKTSSRRIGRFRSSKGGDDRKPIICEDELSRREP
BmAPC10 (XP_00493 3202.1)	MYSVLDNLPTRDLIGHHSTIFGLRAVLINRRCLTTTDLTSLGVGSCVGTG MYLVAGMVARKFAGPGVMISFIIAIAISIFSGACYAEFGVRVPNTTGSAYT YSYVTVGEFIAFIIGWNMVLEYLIGTSACARALSACFDSLFGAISHHLAL NIGTIFGKPPDFIAFAITLLMMLVLIAGVRKSLMFNNILNSINLIVWVFIMG SGLFYADFSNWDHKGFLPYGWNGVFSGAATCFYAFIGFDIIATTGEEAN NPKRSIPLAIVLSLGIILLAYVSTSMMLTLIVPYDQIDTDSALVQM FARAGA PICKYIVAIGALAGLTVSMFGSMFPMPRIYAMAQDGLIFKSLASISSETSGT PALATILGGFAAAMVALTIQLEVLVEMMSIGTLLAYTLVSTCVLVRLRYQPH TTNLIELLPQSLRTPVEPDATATASHETCFTGHLQAHQAASQHVMMVRRVT RSSPDSDDTLPGDDSEEYGRDDTFLVNSAAENKFYVGAVPGGSGAAYTR CGRFMEAISRRHLHAMSYLECPGLFPWVDCGPATEFTGLFVIKAVGVMMFVM IFLFDVLAAYGNPGTSTFTAIVMVLLFLGIVLILLISRKPQNRVALMYTTP GLPFVPTIAIIVNIYLILNLSILTIVRFTVWVWALGLVMMYFKYGIKNSTLETN PKMPRAVTPPPNPLDRITIPPASPGQSKPVGDRNIFEGDNGSGFYGHFDQ YPDPLLSWHESNLEPAQSTSRGTMSTTTYKQVETRYNMKTNSTTSHSTSR PPWAYPDSTYDTWDD
BmAPC11 (XP_01254)	MILRPAEVAIVVMTFAEYAIQIPITIDVHPDYKDNAIKLASLAALFIMTYINI TSVKLFVKVQNVFGVCKVLAACLVVIGGGIYEIAKGNSTHNLKGFEGSTT

4065.1)	NPGSIALSLYYGLWAYDGNVSVTVVTEEIINPGVNVPLSISIAVPLITALYV FMNVAYMTVLSYAEMTSGTAVAVAFGARVLGPFSFIMPLGVAVATFGCAM SVQFGVTRVCYTAARGGHMLELFSYVNIKRLTPAPAVAFQAFLLTAIFISVG NIKTLIQFASWFLWFFYGLAMVALLVLRKTQAAKPRPYRVPTPIPVFVLIV AIFLSVLPIVEDPSVKYLMAIGFILLGVVVYTVFVYYKRTPSALIRKLTFTV QILFESVPPSKDQDD
BmAPC12 (XP_01254 5208.1)	MAGGKWTFCDVVRRRKIIQPHQLEAGNLKRCLSLWDVTALGVGSLGA GVYVVIIGYAAFKEYAGPSIVLSFLIAGVAALFSGLCYAEFGARVPRAGSAYV YSYVAIGEVAFFIGWCNILEAAMGAASLARGLSMYVDGMCNNSILEWA TATMPISSSFLSPYFDLLAFVFLVIGVLLSVGGRESSAVNIAFVLLNLLVII LVVIVGAINADSANWSIPSTDVPPQSGSGGFFPYGVWGTGKGAACFYGF VGFDTINAAAEVVRKPKQETIPMVLIVLLTAFVCYCGISIVLTMMPYYLQ NSTDAVGSFAFIFIGWEWMKWVVFVGAFAFAGILASLFGALLPLRLLYAMSS DGLLVSWFSKLTSSRKSPVFATISSAAVVAILAGILELEQLILMLCIGTLLSY TVVAVCVIVLRFSEYAPQSSPGFFKEVFGCGFRLATRSTARIVYAVLFLFI SVCVSMALILAHVERPLIPLLVHLVLAALMLVIIMSLQPKAKEEVAFKTPLV PLIPCLSIYVNVHLMALIKLQTWIRVLIWLAIGIPVYLLGLCCFKKKDKEE KDIVMPHSDENGKPLPVQIVVESPTPPDSINRIGSHGDNTILEENEQSSDQI RNVRNETFNIEEIKHQVIIENNEEKEAKIIDLLDQVLQAEETYGEAISLKD QNIEEAPDVKEVIHRKSLGELSDAGSDVSSGNQVLSK
BmAPC13 (XP_01255 1684.1)	MEGDNVSKDGGALEAKMSLLNGCTVIVGSIIGSGIFVSPTGVLYKTGSVN ASLLVWIASGVFSMIGAYCYAELGTMIRLSGADYAYIMETFGPFAAFVRL WIECMIVRPCSQAIVALTFVYVVKPLFPECDPPEDATRLLAACILLTLFV NCWSVRAATLVQDWFTYAKLLALFIIIAAGIYQLCRGQVEHFTFEGTSD VTSIALSFYSGLFAYNGWNYLNFIIIEELKDPVRNLPRAIAISCALVTIVYTL TNVAFYTTLSPTEVLGSAAVAVTFAERLFGWFALSIFLVAASTFGAVNGV LLTSSRLFYAGAAQGQMPAMLTMTSRATPAPAVLAVALLSLLYLTVSDIY ALINYVGFATWLSIGAAVLCLPVLRYTKPDLDRPIKVNLFPPVYIICTILV AVPAVASPAETGIGCLMIFTAAPVYLLLLHPRTRINFLANIMHGATYLVQK LTLSVRPKTK
DmAPC1 (FBPP0073 760)	MYQHVQPNNNTNHIHANGHNVPKTTSTNGTMCANGSLGTEGPEAPETDS SGTGRMRKPLERNGSTQNHVVHLERRLGLFSGVALIVGTMIGSGIFVSPS GLLVRTGSGVGSFIIWLACGVLSLLGALAYAELGTMNTSSGAEWAYFMD AYGPAPAFLFSWVSTLVKPSQMAIICLSFAQYAVEAFVTECDPPRGVVK MVALVAIVMILFVNCYSVNLGMAVQNVFTA AKLVAVVVVICGGAWKLM QGNTQHLSNAFNGPMPNVGAIATAFYTGWAYDGNLNLNYVTEEIKNPS KNLPRSIIGIPLVTLCYALINISYLAAMSPQEMIESEAVAVTFGNRILGALA WLMPLSVTISTFGSANGTLFAAGRLCFAASREGHLLDILSYVHVRRLTPAP GLIFHSLIASAMVLHGTIDSLIDFFSFTAWIFYGGAMLALIVMRYTKPNYP RPYKVPPIIPVVVLVISVYLVAAPIFETPRVEYLYALLFIFAGLIFYVPFVKLG MTPRFMKNKVTLFFQLLLEVPTSSMAMFE
DmAPC2 (FBPP0074 557)	MKPSDLLLVLEKVKFRVPLPPGVSSSTLLPKLIRTKDVKQLQDGNAQPQK PKLTKCLNTLDLTSLGIGSCCGTGMVYLVAGMVAQKIAGPGVIISFIIAAIASI FSGACYAEFGVRVPHTSGSAYMYSYVAVGEFVAFIIGWNMILEYLIGTSAC

	<p>ACALSSSFDSLGTGNIAIARTISESIGTIFGKPPDFIAFGITLLMTCVLMGASK SVIFNHSLSNAVNLATWVFMMAAGLFYVDTKTWSEHQGFLPYGWSGVFS GAATCFYAFIGFDIATTGEEAHNPQKSIPKAIVGSLLVVLIAYVSVSLVTL VVPYDHINTGAALVQMWSYVNAPKCRAVVAIGATAGLSVAMFGSMFPM PRVIYAMAQDGLIFRQLSQLWHRTNVPGLATIGSGLAAALVALTVRLEILV EMMSIGTLLAYTLVSTCVLVLRYQPHSTSLVELLPAQLRTPVAHGASDSR SHVTPAEVLEVPGKLTIKRVTRGMSDSDSDSFIDDSPEGFLGGRDDQFLVS DRSENKFGSVHGAPTGPTGQATAFDAMGLNFVTRKIHDIYAYLCPGFFP WINPGQATAESGMYVTKLVGIMFGLIFFLDLFAAIGWSGGLAAFIYFILFIG IFVILLIISRQPQNRYALAFLLPGLPFIPAIATVNIYLIFKLSILTLVRFTVWM SLGFIMYFYGITHSSLEQASDDLELHVDYSKNVEEKAVWDQQSYNQTH EPVWASKEVKQPSTEQRNYGKTTSSSSSAQSSRSQGSAPEKPAGRST AGLNRPVPPPPIAGQAKGSGSGSGPPMERQYTGQFSMFVDEGQFPTWDD</p>
DmAPC3 (FBPP0075 379)	<p>MARVQASDSLIPRQVFEVPPAEPNNSTADSGSQSGVKLKKQIGLLDQVA IIVGVIVGSGIFVSPKGVLFKFSGSIGQSLIVWVLSGVLSMVGALCYAELGT MIPKSGGDYAYIGTAFGLPAFLYLWVALLILVPTGNAITALTFAIYLLKPF WPSCDAPIEAVQLLAAAMICVLTLLINCYNVWVTRVTDIFTGKVVALLV IVGAGVWWLFDGNTEHWDNPFSGGLQDPGYIALAFYSGLFSYSGWNYL NFVTEELKDPYRNLPKAICISMPVTVIYMITNIAYFVLSVSPDEILSSDAVA VTFGDKMLGYMSWIMPFVAVACSTFGSLNGAIFASSRFFVGARNHGLPAA ISLINVNCLTPVPSLIFLGVLTLLLLFIEDVYVLINYSYVEALFTLISVSGL LWMRYKQPKTERPIKVNLAIPHILVCLFLVIFSCTQTPYVVGIGTHIILSGI PVYYLTIHKPVKWLADTSQAINLWCSKFFICMPNQEKFD</p>
DmAPC4 (FBPP0077 892)	<p>MPSSRRAILRHILSGICTKMNRTKSVPTDVMETPLNRCLNTFDIALLGIGH MVGAGIYVLTGTVAKEMAGPGIILSFILAGFISMLAALCYAEFGTRVPKAG SAYVYTYISMGEFWAFVIGWNILLEHMLGAASVARAWSGYVDSMLGGW IGNTTLELTGGIHEPGLAQYDPVLAFLVCIVYAAALAGGVKATAVFNLLT LVNIAVMVLVISVGFYADGKNWSEAEGGFLPYGVGGVIAGAATCFYAF VGFDSIATSGEEAKNPSVSIPVATVISLFFVTVGYILVSAALTMIPISEINPA ASLPEAFGQLNLSWAKYLISIGALCGMTTLLGSLFALPRCMYAMASDGL LFSCFGKINPTTQVPLNLVSGVMSACLALVFDLAKLVEFMSIGTLLAYT IVSASVILRYRPMERIHTTIRVPAVAGSPDDDDDDDEDVASQSSMDTSSPT SEMIEEVLGRLKAQFRCLEPLLGRFEPGSVSVAVMLFIFLSFAICVELK VSWTQLYTGTWWALIYGFIIFAAGTCVAIVAVHNQNTRGLIFKVPVLPFV PALGIFCNILLMVHLDVAVTWVRFVWVCIGMVVYFLYGIRNSKEGEVCSS YSILMTTSEAGKVPWGSFKATSGGKSKSKHSIFERFTGRSKPEDKKSIVEE SENETSGYS</p>
DmAPC5 (FBPP0078 206)	<p>MTNLWKALTRRKTEDVNEGESQLARVLNLFDLTALGVGSLGLGVYVL AGQVAFNIAGPAVTISFLIAAIAFAAGICYAEFAARVPKAGSAYVYSYVTI GEFVAFTIGWNLILEYVIGTASVARGLSGYFDSLNNNMSKALNESMHID VDFLDGYPDFLSFGMVLLLAAILAFGAKESSFLNNIFTTVNLVTIAIVLVA GAMNANVDNWRIPKDVPEGFGTGGFMPFGIAGVMAGAAKCFYGFVG FDCIATTGEEAINPKRNIPLSIVVSLIIIFLSYFGVSTVLTMMPLPYKQDKD APFPHAFDSVEWYTIKWIVTIGAVFALCTSLLGAMFPLPRILYAMGKDGIL</p>

	FKRLSTVNSYTKTPLLATIVSGIFASIMAMLFNLDQLVDMMSIGTLLAYTI VAICVLVLRVYQDEEMTKLVSVKAPNVFRQFFNGNSFREPNSSITKVGI VVFAIFCLVWCSLQKVFDLSTGGIVALSLVGAVLILICVVIGMQPVSTIEL TFKVPLVPFVPCLSVFANLYLMFQLDLNTWIRFLIWIVIGYVIYFCYGMRN STQISRSRSHAEVAASALQNQGQHVNPGEFDPYKVENGGRPYEFSEKL
DmAPC6 (FBPP0084 502)	MPAADELQSPSEMVLTPSSGNPPSSIAQPAANPAEKAQCREGSAESDSS RVVIKKQLGLLEGVAIILGIIFGSGIFVSPKGVIREVESVGASLVIWVLCGLL SMIGALCYAELGTAIPKSGGDYAYIFEAYGSLPAFLYLWDAMMIFVPTTNA IMGLTFASYVLEPFFGGACEIPKIALQLLAAITICFLTLYLNSYYMKVTTKM QNVIMFTKIAALVLIILVGLVWMMMGNVENFTRPFDNTETDPGKMSVAF YSGIFSYAGWNYLNFMTTEELRDPYRNLPRAIYISLPLVTGIYVLANVAYLA VLSPEMIASNAIAVTFGDKILGVFSLIPLMVAISAFGGLSVHIMTSSRICF VGARNGHMPAILSHISVKSYPPLPSLVFLCFLSIVMLVSDVYVLTITYASIV ESFFIMLSVSAVLYFRYTRPCMERPIKVAMWIPALFVIVCAFLVVPIYVAP YEVGMGVLITIGIPFYVGVVWKNKPKWVQSTIDSVTFTCQKLFMSAK EEKED
DmAPC7 (FBPP0088 598)	MTDRYANGVTTSLVEPTNGCAAPGNPNPADGEEKIVLKRKLTLLINGVAIIV GTIIGSGIFIAPTGVFIYTESVGSLLIWLTCGILSTIGALCYAELGTCITRSG GDYAYLLVSFGPLVGFRLWLIALLIIRPTTQTIVALSAHYAVKPFPECDPP QNAVKLLAAICLTLTTINCLSVKVS MKVQDVFTVGKLLALIMILSGLYY MATGELENFRNPWEGIYTARNIGYAFYSGLFAFGGWNYLNFVTEELQDP YKNLPRAIWIAMPLVTSIYVLVNLAYFAVVKPEMLSSLAVAVTFGNRVF GPLAFMVPIFVALSTFGGVNGVLFTSARLFATGAQEGHLPKFFQLFHVKQ QTPISLIFTCLMSLLMLLTDNVYQLINYFSSVLWLSVVASIAGMLWLRHK RPDLRPIKVHLALPITFMVSCVTLVLLPNLEEPQNLLIGIGITLAGIPFYA FIARKKKPKCYGRLSNSVVEICRAIFNTTIIESNEAIN
DmAPC8 (FBPP0099 766)	MVRQISPWKVLRTRKNLQADGSEGETKLNRLVGLWDLTALGVGSTLGA GVYVLAGQIAKDQAGPSVMISFAIAALASLLAGVCYAEFGARVPKAGSA YVYSYVCIGEFVAFVIGWNLILEYVIGTASVCRGISLYLDSLLNDTLKYTF AEVAPMNVSFLGSYFDLAFGLVVFVGFVALAFGVETSTMANNFVTCLNIF ILGFVIIAGALKADYSNWTVPSTVSANSTIGSGGFFPFGFEGTLRGAATC FFGFVGFDCIATTGEEVRNPRKNIPKSILLSLLIIFLCYFGVSTVTLMLPYY IQD VNAPLPYAFEYVGWPVAMWIVTVGGLVGLLASLFGALFPLPRVMYS MAQDGLLKFGLKVSPRFRVPVTGSIVAALFTAIAIAGLFDLSQLVSLLSIG TLLAYSVVAISIMLLRYMDYCEVDENPGQREVRASETTSLSSTSERFTFGS VCTQLFNVHRVQEPNAISSRIVGVLSTLFLCLISLGIGVLMQAHLLIASKEV WALTLLIVLVLMMLVICLICLQPREARRRLFRVPFVPIVPAISIFINIYML QLDTWTWIRFGVWMIVGIPVFLACWYLYDCKNPAKRNPWRWDFYKALK GLQESREQEYHCISKESVLTLETQLKKSPSSSLNRI
DmAPC9 (FBPP0271 785)	MEEFAEYYGMPSWSVTNAFRVLTRKKPLEDSNESKLAKVLSAFDLTALGI GSTLGVGVYVLAGEVSKQYAGPAVVVSFLIAAIASIFAGLCYAEFGARVP KAGSAYIYSYVTIGEFIAFLIGWNLILEYAIGSASVVKGLSTYLDQLCGNP MSSFLGTHMPLNIEGMGAYPDLFAFVV TILFSLAIAVGAKESTRVNNVFT MLNLGVVLFVIIAGLKFVSSSNWSIPKSQVPEGYGDGGFMPYGVSGIHK

	AAVCFYGFIFDCIATAGEEAKNPKKSIPFAVIVSLAMIFLAYFGVSTVLTMLPYFEQDEKAPLPHVFRINGWHVAEYVVSIGAMFGLCSSMMGAMFPLPRIVFAMSNDGLLKFGLGDISEKYKTPFKGTMITGMLTGILAAVFNLSQLVNMMSIGTLLAYSMVASCVLMLRYEVDDRRESRIVANGRATGLEQDRPCALWRRIFNLNGQTVPTKQTSRIVTYSVTLFSLWCMVFSQILTKFEEDLANVTSFDGIKLVLGTIPLAVLLVISRQPTSGVKLSFKVPLVPWLPGISILINIYLMIKLDILTWRFSIWIAIGLAIFLAYGIRHSRLRQREQRNNSIAMMRDCSNSALLGGQENSKYSNEVPLILMHSTS
DmAPC10 (FBPP0306 617)	METESLNRKNSRKSIVNGNGDASAKLTNGDGDGGDGGGGEVTLKAKMSLLNGCTVIVGSIIGSGIFVSPTGVLMYTGSVNLALIVWVISGLFSMVGAYCYAELGTMITKSGADYAYIMETFGPFMAFIRLWIECMIVRPCSQAIVALT FSTYVLKPPFFPECTPPEDSARLLAVCCILVLTINLWVWVAVQDIFTYAKLLALFIIIATGVYQLYLGNTQYFTFENTDTKVTSIALSFYSGLFAYNGWNYLNFIIIEELKDPVKNLPRAIAISCTLVTIVYVMANVSYFYLSPDEVMGSSAVAVTYAERAFGMLAWTIPVFVALSTFGAVNGILLTSSRLFYAGANNGQMPEILTMIIQIRFTPTPAVLAMALLSMLYLTVSDIFALINYVGFATWLSIGVAVLCLPWLRWAQPNLPRPIRVPMVFPVYLIATIFVTVVPMYASPVETGYGILMILSSIPVYLVFIAWKNKPIWFQKTMVSLTRFLQKMLMVLGKQTKPAQV
MsAPC1 (MSEX2.09 350-RA)	MWIGTSACARALSACLDLFLNGAISNHLANNFGTIYGKPPDFVAFGITLLMTVVLVAGVRKSLFFNNLLNAINLSVWVFIMAAGLYYVDLNNWTEHKGFLPFGWSGVFNGAATCFYAFIGFDIIATTGEEANPNKRSIPLAIVLSLGIILLAYVTSSMILTIVPYDKVNTDSALVQMFNYVHAPTCKYFVALGALAGLTVSMFGSMFPMRVIYAMASDGLIFRPLASVSEAAGTPAFATICGGFAAAV VALLVHLEVLVEMMSIGTLLAYTLVSTCVLVLRYQPHSTNLIELLPQSLRTPVDPEGTATAVRETTFAGQSQAQMMPSGQRVMVRRVTRSSPDSDDTLPGDDSEEFGRDDTFLMNTHSENKFGAMPGGSGSNTACGRFFNALSRLHAMSYLEPGLFPWVDLGPATEQTGMFVIKAVGVMYGLVLLFDILAAYGNPGESNFTTALMVLLLIGILVILLMISRKPQNRVALMYTTPGLPFVPMTAIIVNIYLILNLSILTIVRFTIWMAGLIVYFKYGIKNSNLETNPPLPVAVTPPPPNPLDRTTIPPSSPRQSKPTGDRNIFEGDGNAFYSNFDQYSDPLLNWHVTELEPAQSTSRGPMTSSGTTYKQVESRYNAKTNSTTSHTSSRPPWAYPDSAYNWDD
MsAPC2 (MSEX2.03 340-RA)	MHHHEQPPGFACNGSAREGLVWRGCSASCAEDGTAGALTDGNANPGDKLEGPGAAPDDPVHLKRRVGLFSGVALIVGTMIGSGIFVSPSGLLERTGS VGISFIIWMACGLLSLLGALAYAELGTMNTSSGAEYAYFMDAFGGPPAFLFSWVSTLVLKPSQMAIICLSFAKYAVEPFVSECEPPDALVKLVSVIAIVMILAVNCYSVNLATNVQNIFTAAKLVAVAIIVCGGAYKLILGNTRHLQEPNFAS STATLGNIAAFYTGLWAYDGNLNYVTEEIKNPSKNLPLSIIIGIPLVTL CYALVNVSYLAVMSMSEMVDSEAVAVTFGNRLLGPMAWLMPLAVTISTFGSANGTLFVAGRLCFAASREGHLLDILSYVHVRRTAPAGLIFHSLIAVAM VLYGTIDSLIDFFSFTAWIFYGGAMLALIVMRYTKPHAPRPYKVPIIPIYVLLVSTYLVIGPILDKPQWEYLYAAAFILGGLLVYLPFVKWGYSLPFMDKITVFLQLVLEVPTSTTFEY
MsAPC3	MAGVKWPAFCRPRCRRKVFPDQIEDGNLRRCLNRWDLTALGVGSATG

(MSEX2.04 757-RB)	AGIYVLIGYVALNVAGPSVVL SFLMAAVAALFAGLCYAEFATRVPRAGSA YIITYVAIGELMAFLIGWCNILEAAVGAASLSSGLSLYLDSMVNGSMTAW YESAMPLGVPLMSPYFNLLAFLIILCVGVLLSVGVRESAYVNNVLVGVNI IVIAFIIVAGAICADVNNWYIPLTDVPEGSGSGGFFPYGVWGTMQGVAVCF YGFVGFDTVNAVAEEVHRPRRTIPFTILIVLLVAFLVYSSVSIVVTMMVPY YLQDRMYAVTSAFGYVGWNWARWIVFFGAIFGILSNIIGALLPLPRLLYA MASDGLLFSFFAKLTSPSRKSPALATALSAVIISVLAGILDLETLILMMCLGT LFSYTIVAVISVVVLRVYHSSYAPKSSPGFFKELFGCGFRLPTKGTERIVEVSL ALFIAASVSSALVITHANSPLIPVVIHALVILLVIMMLQPRAKEEVSFKTP LVPLIPCLSIYVNVHLMVLIKLQTWICVAVWILIGIPIYIICCCYKRKDIVE DKTTARHENKNGTPPVQIVVESPTPPDTMNRISTYGGDDTIEEMDNETEG SVRGLTMLAKRASEPPKTEEITIHQAYVENNEEKEAKIIDLLDQVLQAEED TYGEVISLQDQKEDIPVRNEVQR
MsAPC4 (MSEX2.01 347-RE)	MMPEEKVRMRKQLGLLEGVTLILGIIFGSGIFISPREV LQKTGSVWGS LTV WAICGGLATLGALS YSELGTTLAQSGGDYHYIDEAYGPLPAFLYLWDAIFI FIPSTNAIMALT FANNVLQPIYHGCTINPLCRKLLAAVTICFLTFINAYDIKF TTRMQNVFSLTMISSLVVIVMGGMVWMAQGHLENFEDGWAGTNSSVSD WSVAIFLGIFS YSGWNYL NFMTEELRDPFVNL PRAIYISLPLVTAIYIMAN VSYLAVLGQDVL TTEAIAVDFATAILGWL RWVMPALVCIATLGGLSVNIM TSSRICFAGARNGHMPPELLAHINIKCMSPMPSLVFLMLLSLLMLIPDNLTS LITYCTVVESFFTTICCSAVLWLRHKKPNLPRPIKVQLWMP SIFVAITSMLL VIPVISEPFAVISGACITLAGLPAYYVLVKNTPAPIQRMTCEIILTSSFCQV
MsAPC5 (MSEX2.10 428-RA)	MSEKVKMRKQLGLLEGVAAILGIIFGSGIFISPKEVLVKTGSVWGALIVWG ACGVLATLGAMSYAELGTTLAQSGGDYHYINEAYGPLPAFLYLWDANLV FVPSTNAIMSLT FANNLLEPIFPNCPIDPMCRKLI AAATICFLTFINAYDVKF TTRVQNVFMFTKILALV TIIIGGIVWIGKGGVEHFSDGWAGTKTSVSDWS VAFYSGIFS YSGWNYL NFMTEELRDPFVNL PRAIYLSLPMVTFIYLLANV SYLAVLGPVGV RATEAIAVDFAVGALS WVKWAMPTLVAIAILGGLTVHIM TSSRMCFAGARNGHMPPELLAHINMKCMSPMPSLIFLMLISLVMLIPNNLT SLITYCTVVESFFTTLSCSAVLWLR YKKPDLPRPIKVSLWMPILFVGV SAIL LVVPVSEPVAVLAGAGMTLAGVPVYYALISCEPKTIRAISTKFTHLCQKL FLSAVEEQEE
MsAPC6 (MSEX2.08 056-RA)	MVGKIAAPAIAARFARRSPKSKEAECESVTLKSDLDADVESKDGGGALE AKMSLLNGCTVIVGSIIGSGIFV SPTGVLKYTGSVNASLIVWITSGIFSMIG AYCYAELGTMIRQSGADYAYIMETFGPFAAFIRLWIECMIVRPCSQAIVAL TFSVYVLRPVFPECEPPNEATRLLAACCILLLTFVNCWSVRAATRVDWF TYAKLLALFIIIAAGAYQLCMGKVEHFTFEGTTDSVTSIALSFYSGLFAYN GWNLYLNFIIIEELKDPVRNL PRAIAISCALVTIVYTFTNIAFYTTLSPT EVLG SAAVAVTFAERLFGWFALSIPLFVAASTFGAVNGVLLTSSRLFYAGAAQGGQ MPAMLTMTTRATPAPAVLAVALLSLLYLTVSDIYALINYVGFATWLSIGA AVFCLPVLRYTRPNLERPIKVNLFFPIVYIICTVLVAVPALASPAETGVGC LMILTAVPVYLLLHPRTKMNCLEAVMHRATYLVQKLTMAVRPKVKMFL HVNTSDHISDYSKPDQSVPMVYDH
MsAPC7	MSAQDAEPAEKYETANGVASACGSTVKLRRELGLFSAVNLILGVMIGSGI

(MSEX2.01 235-RA)	FVSPASALEYSGSVAMCLIIWTVSGLISLLGALSFAELGTVVGKSGAEYAY FQEAFGKIHKFWGPLPSFSCAWIYVVILRPAEVAIVVMTFAEYAIQPFTPDL QADYKDKAIKLTSLAALFIMTYINITSVKLVKVNIFGVCKVFACLVIG GGIYEIAKGNTENLDKGFEGSTTSPGGIALALYSGLWAYDGNVSVTVVTE EIINPGVNVPLSISIAVPLITALYVFMNVAYMTVLSYAEMTSVPAVAVAFGT RVLGPASFLIPLGVAIATFGCAMSVMQFVTRVCYTAARSGHMLEVFSYVN LKRLTPAPAVAFQAFLTSIFISVGNIKTLIEFASWFLWFFYGLAMVALLVLR KTQADKPRPYRVPTPIPCFVLLVAIFLSILPIVHDPSTIKYLMVGFIVLGFIV YTIFVYYKKTPTTLRKFITQVLFESVPPSKEQD
MsAPC8 (MSEX2.12 361-RA)	MAKVGDDVDGLPSRAMDSGLETVDGGDQESNGSVRLKKEGLMNGVAII VGVVVGSGIFVSPHYVLKFAKSGMALIVWVLSGILSMIGALCYAELGTM IPKSGGDYAYIGEAFGNLPAFLYLWGALFILVPTGNAITALTFAEYILKPLW PECHPPTAAISLIAAITCFLTVINCYNVKWVTRVQDSFTAAKILALLITFFA SLWYLFSGHTENLQNMMEGTTTKPGSIAAFFTGLFSYSGWNFLNFVTE ELKDPYKNLPRAIRISMPVVTLVYALANVAYFAVLTNDEVLVSEVLAVTFS EKILGKVAWIMPLFVAMCTVGSNGAIYASSRFFVGARNGHLPLAISLID IRRLTPVPSLIFMCVVTLTLISTDIESLMLIVSAVEAMFTLCSVAGLLWMR HTLPQKMRPIRVNLILPIVFLITCTFLVIFCFENPIKVGIGIAFIALGVPIYLI FIQWSNPKWLQSACNSFNITCSKMFLCIPEDSKEL
MsAPC9 (MSEX2.12 357-RA)	MGEDSQAVNGKVVLKRKITLFGVGHIIIGTIIGSGIFISPTGVYLYTGSVAA SLIIWLVCGLLSTLGALCYAELGTSITRSGGDYAYIYAFGLPAFLRLWIA LLIIRPTTQAIVALTFGNYVVKPFPECDPPQNAVRLLAHVCLCILTAINCLS VRWTMRIQDVFTTSKLLALIVIIIAGIYYICIGNTSNFDNAFEGEYSAGNIA LAFYSGLFAFGGWNYLNFVTEELQDPYKNLPRAIWIALPMVTIIYVMAN LAYFAVVSMMEMMSNPAAVAVIFGDRLFGRWSWVIPVFVALSTFGGVNGV LFTSARLFATGAQEGHMPAFFSLFHVDKQTPIPSLIFTCLFSLMLTTSNVY DLINYYSQLWLSVGASVVGMLWLRRTKPDIPRIKVNIVIPYVFLIAIACL VIIPAIIKQPQDTIIGIAILLSGIPVYYVCVKWQSKPESYHTISGCVLRFLQKA CSCMYVDSTEKLADN
MsAPC10 (MSEX2.01 857-RA)	MPGARHKILGHVLSGFCHKMNRKPLYGDAMDTPLNRCLTTLDITLLGV GHMVGAGIYVLTGTVARYMAGPATALSFLLAGITSTLAALCYAEFGTRIP RAGSAYAYTYVSIGEFWAFIIGWNIVLEYMIGAASVARAWSGYLDAML GAISNATISLTGELHETLLSRYPDLLAFLICIVASLILAVGVKTSAYINNGITI LNLLVISLVIFLGFYADITNWSEKNGGFMPYGFSGVLAGAATCFYAFVG FDSISASSEAKDPSRSIPIATVLSMAMVAFGYILVALALTLMPYKSINAE AALPAALGAVHADWAKYAVAVGAVCGMTTLLGSLFSLPRCLYAMSADG LLFGFLSDINNKSQIPIANLFISGLSSALIALLDLEKLVFMSIGTLLAYTIV SAAVILRYRPTPVVDDKIFGVPLDQSPGDREDSSATGTPATDGGSSSEM EALTVGRLRAQYAWLEPLAGGRAPGAAVTSCVYTFVATAVLCANHF AEPAGLWALLPDFVLSFIIIACLVIIWAHQSPTRLPRVPPVPLPAASVM LNVELMINLNALTWARFAIWMFTGLLLYFLYGIHHSKLGEGVTGLLSRSG SGGGNSGGWGAVEKTNAIARRVGRFARGSKGDDRKPIICDELSSRRDP
MsAPC11 (MSEX2.04)	MTLIMSGIKAGASRAVNLAYRVLRSRKAEEGAARLARVLSALDLTALG VGSTLGVGVYVLAGDVAKNYAGPAVILSFLLAAVASVFAGLCYAEFGARV

753-RA)	<p>PKAGSAYVYSYVCVGEFIAFIIGWNLILEYIIGAASVVKALSEYLDSSLNK AISTHLEAAMPLDSPHLARYPDIFAFGVIMVFSVALAFGVKESTKFNNLCT GVNLCVVLVFIISGSFKADTKNWRIPSEVPKSETKDFGTGGFAPYGLAGI IKGAAVCFYGFIFGDCVATAGEEARPQKSIPFAVVASLLVFLAYCGVSS VLTLMIPYYMQDEKAPFPYVYDRLGWTWAKYAVSVGAICALCSSLLGAV FPLPRIIYAMSSDGLLFLGRVSERFQTPLIGTIIAGLFTGTLAMIFELEQLI HMMSIGTLLAYSMVASCVLLLRERYERTTAHKAAEPLNLTLSRSGFRQIFNAD KHLAPTPLSSAMVTVLVSLYGVWCFVMMLSINQYGEEILSGRPGPIALLS TGTLVLVLTLYAISRQPVSEKKLAFSVPLVPWLPGISILINVYMLNLDYM TWIRFAVWIAAGLLIYFTYGAWHSSERRRTLDSVQLADLHNSHTALLK HNGHTQQHD</p>
MsAPC12 (MSEX2.04 756-RA)	<p>MGCARILAVLRRCKRLDDDDNSTQLARCLGLDLTALGIGSTLGLGVYV LAGAVAKTVAGPAVTISFLVAAIASAFAGLCYAEFAARVPKAGSAYVYSYV SVGEFIAFTIGWNLILEYVLGTASVAKGMALYIDSLFNNTMAKAMTEAAP INVSFLATYPDFFAFGLVMIITVLLGIGVAESTKLNNVFTGLNLLTIITVVVA GATTSDPANWNIKLSDIPPEYVSKAGEGGFMPWGVAGIMAGAAKCFFGF VGFDCVATTGEEAKNPKRDIPLSIVMSLVVIFVSYFSIATVLTMMLPYYLQ DADAPPHVFTEANMPVIKWIVTIGAI FALCTALLGTMFPLPRVLYAMGS DGVLFRLAKINPKSQTPILATFVSGLLSATMAALFNLNQLIDMMSIGTLL AYTIVATSVLILRYEEESPIPVQAALPIPETPLSVVRQTFNLLGLKYPSQLSA TIAKSTISILFVVALVTCVLLRWEVSGAALGVLGAALVLLLVLVLYRQPRN NVQDLFAVPLVPLVPLVSVCMNVYLMVQLDYQTWVRFIWLIIIGYLIYF FYGIRNSSLSLPAKSQVDEKKQNHVVTTKF</p>
NvAPC1 (NV13760)	<p>MPKKVPCNRERAKAILHGEDAPIVEAANNKPAQSDSSSDSGVQLKKQ IGLIDGVAIIVGIIVGAGIFVSPKGVKSSGSGVQALIVWIFSGFLSLVGALC YAEFGTMIPKSGGDYAYISDAFGPLPAFLYLWVALFILVPTGNAITAIFAQ YILQPLWTGCEPPYEAIRLLAAVVTCFLTAINCYNVKWATRVDQAFGTGI FALVIVLAGLYWLCLGNTENLQHPMAGSNSEPGYVALAVYSGLFSYSG WNYLNFVTEELQEPYRNL PRAICISMLITVVYVLANVAYFVVLTRDEILA SNAVAVTFGDKLLGPM SWIIPFFVACSTFGALNGAIFASSRFFVGARNGH LPTALSLINVQNLTPMPSLIFLCIITLVLLFIKDVYTLINYSVFVEALFTMSI TGLLWLRYPDLHRPIKVPLALPIIFFIICAFVTLPCYVTPWEVGVGIAF VLCGIPVYVWFIYWPKKPKWLISASDKFNMLCAKIFLCVQEDKHD</p>
NvAPC2 (NV12558)	<p>MPSVRRMILGHVMSGMCAKINRKKKLEGDVMDTPLKRCLSTFDITLLGI GHMIGAGIYVLTGPVARDIAGPGVILSFLLAGLASLLAALCYAEFGAKVP KAGSAYVYAYVSVGEFVAFVIGWNIILEHMIGAASVARAWSGYVDSLGS RAISNFTKRLMSGYSMDEPLGNVDPVAAALCFVYALLLALGVKCSAAV NSLLTLVNLGVMALVICLGFYYADLGNWNFQGHGFLPYGITGVFAGAAT CFYAFVGFDSIATSGEEARDPTRSIPRATGLSMAIVTVGYILVSAALTLEP YSRISRTAALPEAFAARGIPWAKYVISVGALCGMTTTLFGSLFSLPRTMYA MASDGLLFGFLARVSKRTQVPTINLAIAGFVSGLIALLFDLDHLVEFMSIG TFLAYTIVSASVIVLRYRPPPPSQAMDNTVSSDTTLASSSTHQLASPANT DLAMDSSDCNSMCTSVESQLIQGFCTDGIGRVQPRYAWLSNFLGDCEPGT AVTTSIIFYSVACVSLCSLLVFLSQNTYSPAWWDYVMLINLVIIILVASLLVIA</p>

	AHQQNPPSLGCTFRVPMVPLVPALSILLNIGLMFHLSMLTWLRFVWMI GLLIYFLYGIHYSKEAVDPNSYAVLMETAEAEARGAKWGSLRLNRKSDTTP ILGSEEYLH
NvAPC3 (NV13071)	MTCARLWRALSRRRQDELTAKSELARVLGIIDLTAALGVGSTLGLGVYVL AGSVAKDTAGPAVCISFLIAAIAAFAGMCAEFSSRPKAGSAYVYSYVT VGEFIAFVIGWNLILEYVIGTASMARGVSSYIDVLTNYTIERALHEAMPIK VSFLSQYPDFALGMVILLTLFLSIGVKESSMLNNVFTTINLITISIIVSGII KADPSNWSIDVLDIPMNVNTPGTGGFMPFGIKGVMEGAAICFYGFVGF AVATTGEEAKNPQRNIPLAIVLSLAIIFLAYFSISTVLTMMWPYYDQDAQA PPFYVYDQIGWPTVKWIVNIGAVFALCTSLGAMFPLPRVLYAMASDGI FKFLATVHPKTMPTLLGTALSGLLTGIMTLLFDLQQLINMMSIGTLLAYTI VAVSVLILRYQKEELSTQLSNPKTTGPMYSTPANYFKQIFNLYNQKEPTHF STLTAKYAVLLFGIIVFIIGILVNNCNVLEGKLPVIFAILALLALLTATAIGR QPVQQIELSFKVPLVPFIPCLSIMINLYLMLQLDMNTWIRFAAWMVIGFCI YFFYGVRHSVQGERERLEAETLARKYADQVQVVTKC
NvAPC4 (NV50138)	MSKAKKEDEVEQVGLKRELGLMSAISMIAAVMIGSGIFVSPASALAHSGS VGFCLIIWIVCGILSLLGALAFELSAVVPRSGAEYAYLMDAFSPHRYFG PLPAFICSWVVFVLRPAEVAVVILTFAEYFVQPFEPYVGETREHWDHVK KLIAILALGLIVYINLRSVKLFVKVQNVFTVCKIAACILVIVGGIWWLATG HTELLSDPFNTTTKPGEIALAFYGGWLSYDGTAAAVVAEEVQRPEINI LLSIVIAVPIITVLYVSMNLMYMSAIPVQEMISAPTVAIWAKNVLPWLIF AIPLGVALSTFGCALSLQFGVARLCYVAGREGHVPSFFSWVHYERMTPAA AVTLQGLLSLFFMLVGDILKLIDFASFLIWFYGLSMVALIIMRRTKPDVK RPYRVPIFIPWLVLFIIFLTVMPIIDNPSLMYLFVLFILLGCMYHFYVYK KRKSRFARKLTYLVQMLFMVVPDEVESESEDEAASKKLTKAAS
NvAPC5 (NV14792)	MAKGTKVMENVREGDDKVRMCKQLGLLEGVAIILGIIIFGSGIFISPKGVI QEVQSVGLSLVIWVLCGLLSMIGALCYAELGTSIPRSGGDYAYIHESFGDL AAFLYLWAANLIFVPTTNAIMALTFAKYVLQPFVVCVAVSDSAVRLLAAATI CFLTYVNCYDVKETTKMQNVFMFAKVGALVIVILTGLSWLFMGHAENFE KAFESTNTDPGKIAVAVYSGIFSYSGWNYLNFMTTELKDPYVNLPRAIYIS LPLVTLIYVLANVAYLAVLTPDEMIASEAIAVSFGGKILGVWSWIIPVMVAI SAFGGLSVHIMTSSRMCFVGARNGHFPAMLSHINVKRYTPTPALVFLCILS LIMLCTSDVFLITYCSIVESTFIMLSVAGILYLRKCPDMERPIKVSLEWIPI TFVLICAFVLVPCYERPVEVGMGVLITLSGIPAYLIGVAWKNKPAKFQEI NAKITHVVQKLFLSAREEQEADY
NvAPC6 (NV14736)	MHLNDLYTAFSRKKQIDAPGDSSLARCLSTLDTALGIGSTLGVGVYVLA GSVAKTIAGPAVIISFAIAAFASMIAGLCYAEFGARVPRAGSAYVYSYVTM GEFIAFLIGWTLILEYVIGSASVVRGLSTYVDALFNNSMRNAFESAAPIDIS HLSSYPDFFAFGVTLAFSAALAFGAKESSVANNLFTLANLTVVLFVVIAG AFKADMNNWKLKPSCTKTKCPNGNGGFMPLYGLPGVITGAATCFYGFIFG DCVATTGEEAKNPQRSIPIAIVSLTVVFLAYFGVSTILTTPVLPYEQNADA PPPYMFDYIGWNWARYVVSAGAICGLCASLLGSMFPLPRVIYAMASDGLI FKWMGKVSSRFHTPLMGTLASGLLTVLAAVFELSQLINMMSIGTLLAY SIVAACVLILRYEESKSFETRNDIESYSVSSIVKQLVNYKRLTYSTRLTSKI

	VTSLVFSYFIACIALTSLISISYKEITDGNFTMLIPLLLLLTIVLILILLFIYLQPN CDKQLSFSVPFVPIFGLSILINVYLMMLLDVMTWVRFGIWMIVGLGIYF FYGVWNSTIRTRNSAKNVNQNDWKNQDVPKLT
NvAPC7 (NV15895)	MRNNCWPKAGQEQEGPASSFLQEQQQQQQQQQQQQQPNFQGGPLGN DQDGGGCRGLEQDPEKDDPVHLKRRVGLVSGVALIVGTMIGSGIFVSP SGLLVRTGSGVMSFIVWTGCGLLSLCGALAYAELGTMNTSSGAEYAYFM DAFGAPPFLFSWVSTLVLKPSQMAIICLSFAQYAAEFAEEDPPPQVVK LVALLAIVLILLVNCYSVNLATGVQNAFTAGKLIAILVIVAGGSYKLIQNT QHLHQPFRIEESQGETVKAVFNIGKLATAFYTGLWAYDGWNNLNYVTE EIKDPSKNLPRSIMIGIPLVTLCYALINVSYLAVMSPIEMIDSEAVAVTFGNR ILGAMAWLMPLSVAVSTFGSANGTLFAAGRLCFAASRQGHLMDCLSYVH VRRFTPAPGLIFHSLVAGAMVLSGSIDSLIDFFSFTAWIFYGGAMLALLVM RRTRPNHPRPYRCPLLIPVLVLLISIYLIVAPIIEKPKQIEYLYAAGFIAAGMLF YLPFVKYGYVPKFMEGVNAFLQVLLLEVAPTAFAFD
NvAPC8 (NV10182)	MSKSSGSLKSTKGSIKGSIKDGETNNGPYDSPGVGGDEIKLEAKMSLM NGVTVIVGSIIGSGIFVSPSGVLQYTGSVNASLLVWTASGLFSMVGAYCY AELGCMIRKSGADYAYIMETFGPFMAFIRLWIESMIVRPCSQAIVALTFST YVLKPFPPDCEPPQDAARLLAVCCICVLAFINCWDVKWATRVQDIFTYAK LLALFVIIAGAGGYQLVKNQQTQHFTFDGTTTEVTQIALSFYSGLFAYNGWN YLNFIIEELKDPVRNLPRAIASCTLVTVIVYVLTNVAFYTTLSPNEVLNSKA VAVTFANRLFGPMAWTIPVFVALSTFGAVNGILLTSSRLFYAGACEGQMPE ILTMQTSRMTPTPAVICMALLSMLYLCSSDIVALINYVGFATWLSIGVSVL CVPWLRWAQPNLPRPIRVNLAFFIVYILCTLFVTIVPMYSSPVETGYGCLM ILSSVPVYFAFIAWKNKPKFFQKSVVSFTKFLQKVILVVGKPKPAKI
NvAPC9 (NV10224)	MAALSGFEGLHTRESCIMKLDKDFMDREKGLELFGKFIRTKNIDNLQGEQA RAGSEQYSAGSKQKLQKCLTTLDLTSGLVGVSCVGTGMYLVAGMVARSV AGPGVVIISFIIAIIASIFSGACYAEFGVRVPHTTGSAYMYSYVTVGELIAFII GWNMVLEYLIGTSACACALSACLDALANGAISGAIGDTFGTIFGRPPDFL AFVITLLMMLLMAAGVKKSLVFNNVLNALNLAVWVFIMAAGMFYVDS ANWTEHRGFMPFGWSGVFTGAATCFYAFIGFDIATTGEEATNPKRSIPLA IVSSLVILLIAYVSSSMVLTLIVPYDEVDQDSALVEMFGQVGAYKCKYIVAV GALAGLTVSMFGSMFPMPRIVYAMAQDGLIFRSLSQVWPLTGTPALATLT SGLCAAVAALLIQLEVLVEMMSIGTLLAYTLVSTCVLILRYQPHTTNLVEL LPQSLRTPCRSPTKDTQANGHQVGYGKELRPDQLTTALNTAQSHASQSEL GISSNGQRIMVRRVRRANSSSPDSDDTYGGEDEIGLGKDDQYLVSDRTE NKFYGSVHAAAAGSSCGSAHQYPGNTPIIGPPLNYLQRRQLQAAQYLCPAI FPWVDRGPATEASGRYVMKLVGILYLLILIFDLIIVCGMGMNMGFTTFLLF VFFFAIIAVLLAISRKPNRNSMMFMTPLPFVPAIAVTVNIYLIFKLSILT VRFTVWMTLGFIVYFYYGIKHSSLEEGNAEAAAETSAGGNIELTVDPSK SSHHPQPASSPYATSDRSIYEGQQLDAFGQPVFGSTNFGGTPSSHQQQSGT SGTSGTPLFVPPDSFSPSWDD

Table S8. CDS sequences of the APC transporters of the *B. tabaci*.

Gene	CDS sequences
BtAPC1	<p>ATGTCCCAAACGCCGGAGCCTCCGCCGGAGAAGGTGCCGCTGCGGGCG ACGATGGAGGACATCGACTTGGGCTCGGACACGGAGACGGACAAGAA GGACGACTCGGAGGTCAAGCTCGAGGCGAAGATGTCCCTCCTCAACGG GATCACCGTCATCGTCGGGAGCATCATCGGCTCCGGGATCTTCGTCTCG CCGTCCGGGGTGCTCAGGACCACGGGCTCCGTCAACATGGCGCTCATC GTTTGGACTATATCCGGTGTCTTCTCCATGGTTGGGGCCTACTGCTACGC GGAGCTGGGGTGCATGATCTCCAAGTCGGGGGCCGACTACGCGTACATC ATGGAGACGTTCCGGCCTTTCCTGGCGTTCATCCGGCTCTGGATCGAGT GCATGATCGTCCGCCCTGCTCCCAGGCCATCGTCGCCCTCACCTTCAG CATCTACGTCCTCAAGCCCTTCTTCGTGACTGCGACCCGCCCGACCTAT CCGTCAGGCTCCTCGCCGTCTGCTGCATAATGGTGCTGACGTTTCATCAAT TGCTACTCTGTGAAGTGGGCGACCAGGGTCCAGGACTACTTCACGTACG CTAAACTACTCGCCTTGTTTCGTATCATCCTTGCGGGAGTCTACCAACTT TTCCAAGGACAACTCAACACTTTACGTTTGACAACACCACAACGGAA GTTACGTCCATAGCACTGTCATTTTACTCTGGACTGTTTCGCATATAACGG CTGGAATACTCAACTCATAATAGAAGAGTTAAAGGATCCCGTAAGG AACCTACCGAAAGCCATAGCTATATCGTGTTCTTTGGTGACTGTCGTCTA TGTGCTGGCGAATGTGGCGTTCTACACGACACTCTCACCGCAAGAGGTG CTGAATTCCGAAGCTGTAGCAGTGACTTTTGCTGACCGACTTTTCGGAG TGATGGCTTGGACAATTCCTGTGTTTCGTGCGCCATGTCTACTTTTGGAGCA GTCAATGGAGTACTTTTAACATCTTCAAGGTTATTCTACGCCGGGGCATG TGAAGGACAAATGCCAGAAATTTTAACAATGATCCAAATCACAGACTA ACCCCTGCGCCTGCTGTTCTTTGTATTGCGTTCCTGTCCATGCTGTACCT TACAGTCTCTGATATTTACGCGTTAATAAATTACGTTGGATTTGCTACTTG GTTGTCCATCGGAGTAGCTGTTCTATGTCTTCCAGTGCTGAGATACACAC AACCAAACTACATCGACCAATCAAAGTGAACCTCTTCTTCCCCGCGTT GTACATAATTTGCAGCGTTTTTCGTAAGTGTGTTCCCTATGATCGCCAGCC CTGTTGAGACAGGTATCGGGTGTCTGATGATTTTGACTAGTGTTCCAGTG TATCTTGTCTTCATAGCTTGGAAAAACAAACCAAGCCATTGCAAAGAG CTGTCGTAAAAATGACACATGCTCTACAGAAGTCAATGATGGTCGTTGG TAAGCAGTCGGCCCCATCCACACTATAA</p>
BtAPC2	<p>ATGACATCTAGCTCTGAGCTGGGCACGCCAATGGTGCCGTTGGCACCA AACAGGAAAAAGTATGCATGAAGAAGCAGCTAGGGTTGTTGGAAGGAG TTGCCATCATCCTAGGAATTATTTTGGATCAGGTATATTTATCTCACCGA CTACAGTCATCCAAGATGCCAAATCTGCAGGTCTTAGTTTGCTTATCTGG GTGTTGTGGTATTCTATCCATGGTCCGGTGTCTTATGCTATGCTGAATTG GGGACATCTATAACCAAGTCCGGTGGTGACTACGCCTACATCTTTGAAG CGTTCGGCCCTATTCCAGCTTTTCTATACTTGTGGGATGCCATGCTCATCT TTGTACCCACAACGAATGCTATCATGGGATTAACGTTTGCCAATTATATAA TCAAGCCTTTCTTCCCCACTTGTGATGTTCCCTGACCTACCAAAAAAGCT GATTGCGGCCAGTGTTATCTGCTTTTTGACGTTTTTGAAGTCTACAATG</p>

	<p>TGAAAGCAACAGCAAGGACCCAGAATGTTTTTATGATAGCCAAGATCGC TGCTCTGTGCATAATTATTCTTGCTGGGCTTGCATATATGACTTTTGCGGA TAGAGGAATGACGAATTTGAAGACGTGTGGGCAAACACAACCTCTGA CGCAGGCCAAATTGCAGTTGCATTTTACTCAGGCATTTTCTCCTATTCTG GCTGGAACCTACCTGAATTTATGACAGAAGAATTGAAAAATCCCTACGT AAATCTCCCAAGGGCAATTTATATCTCTTTGCCAATTGTGACCTTATCTA TGTGTTGGCAAATGTGGCGTATTTGGCTGTTCTAACCCCTGTTGAAATGA TACAGTCGGAAGCCGTGGCAGTGTGCTTTGCTGATTCCATCATGGGCC TCTAGCATGGACCATGTCATTAATGGTAGCCATGTCAGCATTCGGAGGTT TGAGCGTGCACATCATGACATCATCTCGAATGTGCTTCGTTGGGGCTCG CTATGGCCACTTCCAGCCATGTTGTCGCACATCAGCGTTGATAGATTCA CGCCAACCCCTTCCTTAGTTTTTCTCAATATTCTCTCGTTAATCATGCTAT ACACTAGTAATGTCCGTGATCTGATCACTTATTCTACATTTGTAGAATCAT TTTTCATCACACTCTCAGTGAGTGGCCTATTATACTACGTGGAAACAA CCCAACAGACCACGACCTATCAAGATTCCATTTGGATTCCCTATTCTTTT TGTCATCCTGTGTCTCTTTCTGGTCGTCTCCCATTCCTTTGACTCGCCGC TGGTAGTTGGAGTCGGAAGTCTCATCACTCTAAGTGGTGTGCCAGTTTA TTATTCGGAGTCGTTTGGCAACCCAAGCCAAAATGGTTCCGGAGCGCT CTGGATAAAACAACGTACGTGCTACAAAAACTGTTTATGTCTGCCAAGG AAGAGCGTGAACCTGTGA</p>
BtAPC3	<p>ATGGTCTCATTTTGGGACTCGATATCGCAGCGAAAGACTTTTACGTGAT AGCAAAAGAGGAGTCTAAACTCAAAGAGTCCTGACCACCTATGACTT GACAGCTTTGAGTATTGGCAGTACACTCGGAATCGGTATTTACGTTCTTC CGGGAGCTGTAGCCAAAATGTCGCCGGACCCAGCGTTGTTCTTTCTTT TGTTCTCGCTGCCTTTGCGTGCGTCCTTTCCGGAATTTGTTATGCTGAGC TCAGTTCGAGAGTGCCAAAGGCAGGGTCTGCCTATATCTATGCCTATGTA ACGGTTGGCGAACTAATGGCTTTTATCATTGGATGGGTAGTCATCATGGA ATACGTAATAGGTGCCTCCAGTGTGCTCGAGGCCCTAAGTGTTTATGTAG ACTCTCTGTTTAATGGGACGATGGAAGCAACTTTTCGTGAGGTCTACCA GATCGAAAATGTACCGTTTCTTTACCTTATTTTCGACTTTTTTACATGTGC TGTCTGCATCATTTTAGGAATTGCTCTGAGTGTGGGTCTCAAAGAATCAG CGCGAATGAACAATGTGCTAGTGGTCATTAATGTCGCCGTTATGCTGATT GTCATAGGAGTTGGAAGTCTGGAAGCCAACTTCCATAACTGGGCACTGA CTCCCAAAGAGGTGCCCTCCGGTTATGGGGTCGGAGGTTTCTTTCCGTA TGGTGTACAGGGGCAATAGCTGGAGCAGCAACATGTTTTTACGGATTT GTCGGTTTTGATTCCATCACACCACAGGTGAGGAGGTAGAAAACCCA CAGAGAGCGTTACCTTTATCAATCATTCTTTCCCTGACAATAATTTGCGT CTTATATTGTGGAGTGGCAATTGTTTTGACATTAATGTGGCCCTACTATTT ACAGGACGTTAATGCACCCTTACCATACGTCTTCGGTCAAATCGGCTGG CCTTGGGTGCAGTGGGTAGTCACAATTGGAGGCATAGTTGGGACCTTTG CGAGTTTAATAGGATCACTTCTTCCAATCCCTCGCGTAGTATATTCAATGG CTGATGACGGCTTACTGTTTAAGTTCTTGGCTACTGTACATCCAAAATTT GGAACCTCTTTTACTGCAACTCTAGTTACGTCAGTCATCGCTGGAGTATT GGGAGGTATATTCAATCTGAAGCAATTAGTTGACTTGATGTCCATCGGAA</p>

	<p>CTTTGCTTGCATTTACTTTAGTAGCTGTCTGCGTTCTAATTCTGAGATATC GGGATGAACCGGATGAAAATTGTATGTTGATTAATTCGGAAATCGGAGA ATCGTCACGACTGACGCAAGTTTGGCTCGGCGAAAAGACCACCGTCAA GAAGATTTTCAAACAGCTCTGGAATTGGAACAAACTTACGATTCCCACC TACTTGTCCAGCGCAATTGTCACTGTTGAAACCATTCTTTTCGTCTCATG CTCCATCGGACTCGTGTCAATTGGTCAATTATAAAGCATCGCTTGATGCTT CAAATTTTGCAGTGTATAACCATAATTACTGTTTCCGTTATGATTTTTCTTCT TATTTCAATAAGTCTTCAGCCTACATCTTTGATTTCTCTTCAGTTAAGGT TCCTTTTCGTGCCTATTTTACCTGCCATCAGTATTATGTTTAATGTATATTTG ATGTTGCTCCTCGACTTGGCCACATGGATCAGATTTGTTTCTTGGCTATC TGTAGGTTTTGTAATTTACTTCTGCTATGGCATAACTCATAGCTCAGAGA GAAAATCTGCAATCCAGAATCAGCGGGAGTGTAGTGGTGGATATGATAC TTTGAGCCCTAATATTTCCATAGTGAGGGATCCTATCCTGTAA</p>
BtAPC4	<p>ATGAAACATAAATCCGTGATCTCTTCTTGTTCGAATAGCTCCTCGGA ACTCTCAAACAACAACAACACCACCGCCAGCAACAATAACCTACCGGC AGGTAATCATGCACAGAACGGGAAGGAAGGAGTCCAGTGGCGGAGCG GGATGGGGGGCCGGGGCCTGGGGCTGGGCCTGGGGGGCGCGGGGCTCG GGAGGCGGAGGGAGCGGGGGCGGCGCGGGCGGCTCCGGCGGGGAGGC GGAAACGGACGACCAAGACGATGGGCCGCGAGGAGACAAGCTGGAGG GGGCGGACCCAGCTCAGGATGACACTCTTCACCTCCAGAGACGGGTGG GACTCCTCAGTGGGGTGGCTCTAATCGTCGGAACCATGATTGGTTCCGG CATTTTTGTTTCCCCGTCAGGCCTGATGGTGCGCACTGGTTCCATTGGCA TGAGTTTCGTCAATTTGGATCGCATGTGGCGTTGTCTCTTTTTTGGGGCG CTGGCCTATGCGGAGCTGGGGACGATGAACCCGAGCAACGGGGCCGAG TACGCTTACTTCATGGACGCGTTCGGCCCGATCCCTGCATTCTCTTCTC GTGGGTCTCCACGCTGGTGCTCAAGCCCTCGCAGATGTCCATCATCTGT CTCAGCTTCGCCAAGTACGCCGTCGAGGCCTTCGTGACGAGTGCAGAG CCCCCAGAGCTCTCCGTCAAACCTCGTCTCCGTCCCTCACAATACTGGTAA TATTGGTGGTAAACTGCTATAGCGTCAATTTAGCCACCGGTGTGCAGAA CACGTTTACCGCCGCTAAGTTGTTTGCTATTCTCATCATCATCGTAGGAG GTTTATATCAGCTTATGAAAGGCAACACGAAAAATTTGGAGAACATGTT TGAAGGAACAACCTTCATCTGTTGGCAATCTTGCGACGGCATTTTACACG GGTCTGTGGGCGTATGATGGTTGGAATAACCTGAATTATGTACAGAAAG AAATTAATCACCATCAAAGAATGTTCCCTCGGTCAATCATGATCAGCATA CCTCTGGTAACAATCTGTTATGTTTTAATAAACCTCTTATCTGGCTGTG ATGTCACCTGCTGAAATGGTTGAGTCGGAAGCGGTTCGACAGTACTTTTG GAAATCGAATCCTTGGGCTAATGGCATGGTTAATGCCGCTGTCAGTGAC AATATCAACCTTTGGTTCAGCAAACGGAACGTTGTTTGCCGCTGGTCGG TTGTGTTTTGCAGCGAGTCGTGAAGGACACCTATTAGATATTTTGTGATA TGTCACGTCAGGCGATTGACTCCTGCTCCGGGGCTAATATTCCAATCA ATTATTGCCATTGCCATGGTCATGTCGGGTACAATCAACTCACTCATCGA CTTCTTCAGTTTACGGCGTGGATTTTCTACGGTGGCTCAATGCTTGCTG TTATTGTGATGCGCTATACTAGACCTAACTTCCCGAGACCCCTACAAAGTT CCAATTATCATAACCATGGACGGTGCTTTTTGATTTCTCTGTATTTAATAGTA</p>

	<p>GCTCCTATTATCGACTCTCCGCAGATCGAGTACCTGTATGCATCATTTTTTC ATCTTTGCAGGCCTTCTAGTCTACGTTCCATTTGTTCACTACAAGGTCAA CTGCAAATGCATGGAGAAATTCACCGTTTTTTGTCAACTATTACTGGAAG TTGCGCCGACGAACATCACCTATGATTGA</p>
BtAPC5	<p>ATGAAGATTCCAACGATTCTGGGCCCGGGTTATTCCCGACGGGCGACT ACAAAAAAGACGGCCTCTCATTATTCGCCAAATTAATTAGGACGAAAAA TGTGGAAGGAATGGACGGCGAGATTTTCGCTCAAATTAGGACTGAAATC AAATCGGATAAAAACTTAAATTGAAGAAATGTCTAACAACGTTAGATT TAACTTCACTCGGTGTCGGCAGTTGTGTTGGCACAGGAATGTATTTAGTT TCTGGAATGGTCGCAAGAAATTACGCCGGTCCAGGTGTAATAGTTTCGT TTTTTATAGCAGCCTTGGCTTCCATATTTTCAGGTGCTTGTTACGCTGAGT TCGGGGTACGAGTTCCGCACACAACAGGCTCGGCATATATGTATAGTTAT GTAAGTGTAGGTGAATTCATTGCATTTCGTAATTGGTTGGAATATGATATTA GAGTATTTAATTGGAACCTCAGCATGTGCCTGTGCTTTGAGCGCTTGTTT TGACGCCCTCACGAGTGGCGCCATTAGTAAAACGGTAGCCAGTGTAACG GGAACCATATTCGGTTCGCCCTCCCGACTTCCTAGCTAGTATAATAACAGT CTTGATGACAATTTAATAGCCGCTGGTGTAAAAAAATCACTAGTTTTTA ATAATGTTCTAAATGCAATCAATTTAGCCGCGTGGGTCTTCATAATGAGC GCAGGCCTCTTTTACGTCAATACGGACAACCTGGTCCCAGCACAAAGGAT TCCTTCCCTACGGTTGGTCCGGGGTATTACAGGGCGGGCGACGTGCTT TTATGCATTCATAGGGTTTGACATAATCGCAACGACGGGCGAGGAGGCG AACAAACCCTAAGAAATCCATTCTTTAGCAATAGTTAGCAGTTTAGTAAT AATTCTCATGGCCTACGTCACCTCATCTATGATGCTCACACTAATAGTTCC CTACGAAGAGGTGGATCAGGACTCAGGGCTGGTCGAGATGTTCCGGTCA AGTGGGGGCGTACAAGTGCCAATATATCGTCGCCATCGGGGCGCTCGCC GGGCTCACGGTCAGCATGTTCCGGCTCCATGTTCCCCATGCCCAGAGTAG TCTACGCCATGGCTCAGGATGGCCTCATTTTCAGGTCTCTGGGTCAAGTT TTGCCTTTCACCGGCACTCCGGTCTTCGCCACGTTTTGTAGTGGTGCCG CGGCCGCCATTGCCGCCCTTCTATTAAACTCGAAGTTCTTGTTGAAATG ATGTCTATAGGTACTTTACTTGCATATACTTTAGTCTCAACATGTGTCCTC ATCTTGAGGTATCAACCGCACACCACGAACCTCATGGACTTTTACCAG AGTCTCTCAGGACGCCTCTGAACAGGTCGCCTTCAAAAGAAAATGTTG GCAACGGCCAGGCGGGAAAATATGGCACAACCTCTGCCAGCAGATAATAT GAAAACGAGTTACAGCGGTGTCATATCGCAGCAGCCTCCAGTCACAAC GCTGAATAACCAGCAACATCGAGTGATGGTGCGCAAAGTTACCAGAAG ATCCGGAAGTAGTTCGCCCGATTCCGGACGACACGTATGCGGGGGAGGA ATCTGAAGACCTCTCCATGCGCGACGACCAGTTCCTGGTTTCAGATAGA AACGAGAACAAGTTCTACGGATCCGTTACGCTGGTTCAACCCAAGCC AGCGCGGGAATCAAACCTCGCTTACGCTATATCAGTCATCGGCTTCAGG CGGCGACGTACTTGTGCCCGGCGATCTTTCCATGGGTGGACACGGGCC GGCTACCGAGGAGAGTGGCATGATGGTGATGAAGTACGTGTTGCTCCTA TACATCCTCATTATCCTCTTCGATCTACTCATCGTTTGTGCCATGGACTCC ATGGGGACTTTCCTCAAACCTTGACTCTACATCCTGTTTCGCCTCCATCAT AGCCGTTTTGGCTCTCATCTCGAGAAAACCGCAGAACAGGAAAGCGCT</p>

	<p>ACTCTTCATGACTCCGTGCGTCCCTTTTGTTCCTGGGATTGCAGTGGCGG TCAACATATACCTCATCTTCAAACCTCCGTTCTGACCCTTGTTGATT ACGGTCTGGATGACGATAGGCTTTGGCGTGTACTTCTACTACGGCATAA AGCACAGCTCCTTGGAGCACGAACCGGACGATGAGGACGGGCTCAGA GGGGCGGAAGGCGGTCAGCAGAATATCGAAATGAAGCCGCCTCTGAGC AAGGCGACGAGCCCCGCCCGCAACCGGTTTCGGCGCCCCACAAGCAG GAGGTGAAACCCGAGCCCGCCAGGCGCCACCTCCAGGGCGCCA CCGCTCAGCCAACGATCCGAGAGCCTCTTCGTCCCACCCACGGAATTCC CGACGTGGGACGACTAA</p>
BtAPC6	<p>ATGGCCGAGCCCGGGGCTGCGGGGGCGGGGACGCTGAACGCGCCCTCC TCGTCCGGCGGAAGCGCGGGGGTTCGGGGTGGACGGGCCGGTGGAGCT GAAGAAGGAGATCGGGCTCCTGGACGGCGTGGCCATCATCGTCCGGGT CATCGTCCGGGGCCGGGATCTTCGTCTCCCCAAGGGGGTTCATCGAGAAC GCCGGTCCGCCGGCTCGGACTCATCGTCTGGTTCCTGTCCGGAGGCT TGTCCATGATCGGGGCCTTGTGCTACGCCGAGCTCGGAACGATGATCCC AAAATCTGGCGGTGATTACGCGTATATCAACGAGGCTTTCGGTCCATTGC CAGCGTTCCTCTTTCTTTGGGTGGCGTTGATGGTGATACTACCATCCAGC AACGCTATCACGGCTCTCACATTTGCTCAATACATTCTGCAACCGATTTG GCCTGACTGCGAACCGCCCTACCTGGCGGTCAGACTCATCGCTGCCGTA GTTGTCTGTTTATTGACTGCCATTAATTGTTACAATGTCAAATGGGTCAC CAAGGTTCAAAACGTTTTTACGTTGACCAAAAATTTTTGCTCTGATGACC ATTATCCTCTCGGGTCTTTGGCTCGTTGTGAATGGAAAAACGGAGAAGA TTTCGCGACCGTTCGAGGGAAGCAACTATGATCCTGGTCATTTGGCTTTA TCCGTTTACTCTGGTCTATTTTCCTTCGCTGGCTGGAATTATTTGAATTC GTGACGGAGGAGCTCAAGAACCCTTATGAAAACCTGCCTAAAGCGATC TGCATATCTCTGCCGCTGGTCACTGTCGTCTATTTATTTACAAATGTAGCA TATTTTGTAGCGCTGACAAAAGATGAAATTCTAAAATCCAGCGCAGTTG CTGTGACATTTGCAAATAGACTCTTCGGTCCGATGGCCTGGGTTATGCCA CTGTTTGTGGCGTGCTCGACTTTTGGAGGTCTGAACGGCGCCATTTTGT CATCCGCTAGATTGTTCTTCGTCCGTGCTAGGAATGGACATTTGCCGAAG GCTATAGCCTTAATTAACGTTAAGCACAGCACACCTGTTCCATCCTTGAT ATTCATGTGCAGTGTGACCTTATGTCAAATGCTGATCAAAGACATATACT CTCTGATCACGTATACAGTCTTTGTAGAGGCATTACTAACCCCTTTTCTCTA TTACGGGTCTTCTTTGGCTCCGAGTAAAGAGACCAAATGCACAAAGGCC GATCAAGGTGAACATAATATTGCCGTTGATTTTCTTCGTAATTTGCTCATT TTTGGTTGACTACCAATTTTCGTAACCTCAGTAGAGGTTGGAGTAGGA CTTGCCTTATCTTTTCTGGCATTCCAATATACTTAATTTTATTTACTGGG AACAAAACCATCATGGTTCAGGTATATTATAGATAACTTCAACCTGACA TGCGCCAAGTTGTTCCGATGTGTTTTGGAAGACACTGTGGTGGAAACA GAAACTAAAGTTTCGTGA</p>
BtAPC7	<p>ATGACCACCCCGAAAGACGGGAAATTTCGAGTTGAAGAAATTCCTCAAG AATCTTTGTCCAGAAGAATGTTCTCGATGTGAGGACGGAAAAAGCAGG CTGAACTCCGAGAGCAGCAACATGTACATCGAAGTATTCAGTGGCAA AAGGCCGAAGAAGGAAAACCGGCCAAAGGCGTCCAACCTCAGAGGGA</p>

	<p>GCTGGGGCTAATGAGCGCTGTGAATTTGATTCTCAGTGTCATGATTGGTT CTGGAATTTTTGTCTCTCCAACACGAGCTCTGAAGGAGGCCGGATCCAT CGGAATGGCCCTCATTGTTTGGGCTCTATGTGGAACCATCTCCATGCTAG GTGCGTTGTCTTATGCTGAGCTTGGCACTGTTGTTAACAAATCCGGAGC TGAGTACTCTTACTATCGAGAAGCATTGGACCCCTCCACAAATTTGGG GACCACTTCCTAGTTTCATCAATTGTTGGGTTTCAATCGTATTTGTCCGC CCTGCAGAGATTGCTATAATCATCCTGACTTTTGCGGAATACTTTACTCA ATTACTTAACCCCATATCCCACCAAATGAAATTGATAATTACTATGATAG AAAGAAGATAGTCGCCATCGCAGCTCTTTTTATTATCACAGCAATCAACT TCTTTAGTGTCAAACCTGTATGTTAAGATTGAGAATATTTCTCATCATTCA AAGTTGCTGCTTGCTTCCCTGTATAGGCTGTGGTCTCTACTACATTTTC ATTGGGAAAACCTCAAACCTTGAAAATCCATTCAAAGGATCAGATTTAT CGCCAAGAGCTTTTGCAGTGGCATTTTACCATGGTCTTTGGGCTTATGAT GGCTGGTCCCTCAGTGACTACTGTCACAGAAGAAATTAAGAAACCTAATA AAAACATCCCCAGAGCAGTCATAATTGCTGTGCCTTTGGTCACAATGTT GACTGTTTCATGAATGTCTCTTACATGACAGTTCTGAGCGTTCCGGAGT TGATTCAAGCCAAAGCTGTTGCCAACGAAGTCGGTGTGAAAGTTTTGG GTCATTTCTCCTGTTAATCCCAATGGGTGTTGCACTTTCAACGTTTGGT TGTGCTCTTAGCGTGCAATTTGGAGTAACCAGATTATGTTACTCAGCAGC TAAAAACGGACACATGATGGAAATATTTTCTATGTTCACTCGAAAAGA CTTACCCAGCTCCAGCTGTGCTTTTGCAGGGTGTCTGTGTCTGGTGT GCATTTTGGCTGGAGATATAATTACCCTAATTGAATTCGCCAGTTTCCTTG TCTGGACATTCTATGGTCTTGCCATGGTCGCCTTAATTGTTATGAGATACA CGAAAAAAGATGTTCTTAGACCATGGAAAGTACCAATTGTTATTCCTATT TTGTTATGATCATCGCCTCATGTTTGGCAATTATTCCAATTGCAATGAAG CCTCAACCTCAGTACCTGATAGCCGTTGGATTCTTATTTCTGGATTTGTT GTCTACATTCCTTTCAATTTACTTCCAGAAGAAATTATTGGCGCAGATATG TTCACGAAAGCAGTCAAGTCAGTGATGAACGTTCAACCTCCTGACCAA GATCAAGAACTCATCGCCAAAAAGACAGCCCAGCTTAATGATGATCAGT CTGATCCAAAAGAGGCTCTGTGTGTTGTTTCTTCTGTGACGAAACCAA AGACGATTCGTGTTGCGATGAGCCTTGCTGTGACGACTCATGTCACAAA AAATCGTGTTGTGACAAATCGTGCCTTGAAAAATCGTGTTGTAACGAAT CGTGTCTCGAAAATCGTGTGTAACGAATCGTGTCTCGAAAATCGTG TTGTGACGAATCGTGTCCACGTCAATAA</p>
BtAPC8	<p>ATGCCGGGCTCTAGGCATAAAATAATTGGACATGTTTTTCAGCGGAATTTG CACAAAGATGAACCGAACCAAACAATTGAGCTCCGGTGAGGAGGTGAT GGATACACCTCTTAAGAGATGTCTCAACACTTTCGATATCACTCTTTTAG GTGTCGGGCATATGATTGGTGCAGGAATATACTGTGCTAACAGGAACAGT GGCCCGAGATCTGGCCGACCAGGAATTATTCTCTCGTTCATTTTAGCCG GCATAACCTCAATTTGGCTGCTTTGTGCTACGCCGAATTCGGCGCACG GGTGCCTAAAGCTGGCTCGGCGTACGTTTACACCTATATCAGCGTCGGA GAGTTCTGGGCCTTCGTCAATTGGCTGGAATATCATTCTCGAGCATATGAT TGGAGCTGCGTCTGTGGCCCGCCTTGGAGTGGCTACGTAGACTCACTT TTGAGTGGGAGCATAAGTGCAGCCACGGTGGCTTCGATCGGCCAACTG</p>

	<p>CACGAAAAATGGTTGGGTGCTATCCAGACTTACTCGCCTTCATGGTCT GCATATCATA CGCTCTTTTACTAGGTATCGGAGTGAAGAGTTCAGCGGTG GTGAACAGCCTGCTGACGCTGGTGAACCTGAGCGTGATGGGGCTGGTG ATCGTGATCGGTTTCTGGTACGGGAAGCTGGAGAACTGGAACGCCAAC AACCGGGGGTTCCTCCCGTACGGGTTCCTCGGGGGTGTTCGCAGGGGCC GCCACCTGCTTCTACGCTACGTCGGCTTCGACAGCATCGCCACCTCCG GCGAGGAGGCCAGGACCCCTCCTTCTCCATCCCGGTCGCCACCGCACT CTCCATGACACTTGT CAGCTTCGGGTACATTCTAGTGAGTGCAGCGTTG ACCCTCATGGTTCCGTACACTATGATCGATGCCAGCGCAGCCCTTCCCGA GGCATTCTCCATGATGGGTCTACATTGGGTCAAGTACGCAGTAACGATTG GGCACTCTGTGGTATGACGACCCTTACTTGGCTCCCTCTTCTCTCTC CCGCGATGCATGTATGCCATGGCACAAGATGGACTCATCTTCGCCTTCCT TGGCAAGATCAATAAAACCACACAGGTTCTGTGTAAATCTCATCATAT CAGGATTGATGAGCGCCACGATTGCACTCTTATTGATCTAGAAAACT GGTGGAGTTCATGTCGATCGGAACATTGTTGGCGTACACCATCGTTAGC GCCTCGGTGATAGTTCTTAGATACCGTCCGAACACACCGCCTCCTTCTAA TGATAACGTCAGCGTTAATGACGTCTACATAATGTCACCCTCTCCTGGGG TGGAGGAGTTC AAGGTTTGCATGGGTGGACGCCTGAAGCCCAGCTTCG ATTGGCTGGAGCCGGTAGTGGGTGGTGCAAACCTGGCGAAGCTGTGT CTGTTGCCGTTTT CATTTCACCTGCTTCAGCGCCCTGCTCTGCTTCCAC TTTCATTGGGCCACCGCTCAAATGGAGAATGGCGCGTGGTGGACCGTTT TCGGCTGCGTCTTCTGATTGCCGTCATGCTCTTCTGTTTACTAGTGATA GAGGCTCATGAGCAGAATAGAACC GGGCTGACGTT CATGGTGCCCTAG TTCCTTACGTACCCGCTTTGAGCATTCTTTTCAACGTGGAGCTCATGGCA AACCTGAACATCTTAACTTGGCTCCGGTTCATGATCTGGATGATTTTAGG GTTACTGGTTTACTTTTTATATGGTATCCACCACAGCAAGGAAAATGATA CCACTTCCTTACTCGGTGCTCATGACGTCATCAGAGGCGACGAAATC AAAATGGGGCTCGATTCTGCTCCGGTCACAATTCCTGTCACGAGGAAA AGAAGGTCCGGGAAGGGAGATCGCCAGGCTATCGTCAATAGCGACGAC GATACTGACAGCTCGGACTAA</p>
BtAPC9	<p>ATGACGTTTATGCGAGGTGTGATCGGGACTTTAACCCGAATCAAAGTTT CGGATGAGGATATAGTGGACAGCGACGCGCCGAAGTTGGCCCGTGTCTT TGACCTGTTGACCTGACGTTGCTCGGAGTTGGGACCACACTCGGGGT GGGCACCTACGTGCTTCCGGGTGCCGTCGCCAAAAACACCGCCGGTCC CGCTGTCACCGTTTGCTTCGCCATTGCTGCCGTTGTCTCATTGTTGGCTG CTTTATGTTATGCTGAATTTGCTGCCAGGGTACCGAAAGCGGGATCAGCT TACGTCTACTGTTACGTCACAGTCGGCGAGTTTTGTGCATT CATAATAGG ATGGAATTTGCTGCTTGAGTTTGT CATTGGTACAGCAAGTGTAGCGAAA GCGTTCACCGGCTATGTCGATGCACTTTTTGGGGGTGGCTACGCTTCCAT GATGCAAAGTGTCATGCCGATGCATGTTTCCTTCTAGCCCAATATCCAG ATCTCATGGCTCTGTGCGTCGTCCTATTGTTTTCACTTTTGTGGCCTGG GGTGTCAAAGAATCTACATTCATTAACAACATCTTCACGACCGTAAACTT GGTAACGGTTGTCATCGTAATTTTCGCCGGGATTATGTTTCCAAAATGA GCAACTGGTTCATTGACCCGGCGATGATCCCTCCGGAGCATAAGGCAGC</p>

	<p>GGCCGGGAAAGGAGGTTTCATGCCTTACGGCTGGTCGGGAGTCTTGGC TGGGGCCGCTACCTGCTTCTATTCTTTTGGCGGATTGCGACTCCATTTGCA CAACGGGCGAGGAGGCCAAAAATCCACAAAGAACCATCCCTTTGGCTA TTGTTATGACACTTGCGATTGTGTTTCGTTGCCTACTTTGGTGTATCCTCCG TTATCACGATGGCGTGGCCTTATTATGACCAGCATATTGACGCTCCATTCC CATATGTATTTGACAAGACAGGACTGCACGCTATAAAGTGGATTGTAAC AGTCGGCGCTTTGTTTGTCTGTGTACCAGTATGCTGGGAGTTGCTTTTC CTCTGCCCAGAATCCTATACGCCATGTCATCAGATGGTTAATTTACAAG TTCTTTTCCCGTATAAATGCGTACACACAGACTCCTGTGTTAGCAACTTT AATATCTGGTCTTTTAGCTGGTATTATGGCAGCAATGTTGACCTGACAC AGCTAATCGATATGATGTCAATTGGTACTCTGATGGCTTATTCAATTGTTG CTCTGTGTGTGATTTTACTGAGGTACAAAGAGGACGAATCTAGTGTGGA GGACGTCAGTAAAAAGCAAAACGATTTTGGGTCAAATAAAACAGAGCA GTACACTTTCAGCTCTGTCTTAAGTATATTAAGCACAGAAAAAGAGAGC TCACCTACCGCAAGAACAGTATTCATTGCGAGGATAAGCACAACTATATT CTGTGCTGTACGATAATTCAGACGCTAATCCTTGTTCTCAGCGAATCAA TATTTTCGGCTGAATCATTTTGGAGTGTCTTGAGCACTCTCGTCGTTTAA GCTAATTTTGTAAATTTAGGAGCGACCATGTATGTCATTTTCGTTGCAACC ACAATCGGATACAACCTACCTCAAATTCAGGGTTCCTGGAGTGCCTGTG GTGCCATGCTGCTGTATATTTATGAATACATATCTTATGGCCAACTCGAT TTTCACACGTGGGTCCGATTCCCGGTGTGGTTGGCTGTTGGTTTTGTGAT CTACTTCACCTACGGAATCCAGCACAGCGTGCAAGGTATCCTCGATCGT CAACAGGCGAAACAGGAACTGAAATCGCAGCCACCCCCTCCCGCCAG ATGTACAAATGA</p>
BtAPC10	<p>ATGTTCCCCCGAATGTTAAGGTGCTACTAACAATAATTCGCCTCGGTTGT TACGCGGCTGAAATCGGAAGACTCAGTGGATCTAGAATCAAACAAGCC GAAGCCGAAGTTGGCGAGAGTGCTAACCGTTCCTTGATCTGACAGCGTT GGGAATCGGGTCAACTCTCGGTGTTGGTTCCTACGTCTTACCGGGAGAA GTCGCTCGCAATACAGCTGGACCTGCTGTCACTGTCTCTTTCTTCATTGC TGCTGTTGTCTCCATTCTTGCCGCTCTTTGTTATGCCGAGTTTGCAGCTC GAGTTCCTAAAGCAGGATCAGCATAACGTTTACAGTTATATGACTGTCCGG GAGTTCCTGCGCTTTCGTCATAGGCTGGAATCTCATCTTAGAATATGTCAT CGGGACGGCCAGTGTGCAAAGGCACTGTCCGGATACCTGGATGCCCT GACAGGAAAAGTGTTTCGAAACGTACATGTTGCAACATTATCCGATGAAT GTCAGTTTTCTCGGTCTTATCCAGATTTGATCTCATTCTCCGTCATCATG CTACTTTCATTTGTGCTAGCATGGGGCGTTAAGGAATCAACAATGCTCAA TAATATTTTTACTGCTTTGAACCTAACCACGGTTGGCATCATAATTATTGC TGGGATAACAGTCGCCAAGCCTTCCAACCTGGTTCATCGCGAAAGAAGAT TTACCCGTGGACCCAACTCAAATAACAACCAGGAGAAGGAGGTTTC ATGCCGTTTGGCTGGACTGGTGTCTTAGTTGGAGCAGCTACTTGTTTCTA CTCTTTTCATTGGGTTGACTGCATAGCAACAACAGGGGAAGAGGCGAA AAACCCCAAAAAGACTATTCTCTGGCCATCGTTTTGTCTCTGTTGATAA TTTTCTGCGTGTATTTTGGAAATATCTGCAGTTCTCACCATGATGTGGCCTT ATTATGACCAGGATCCAGCGGCTCCATTCCCTTCAGTGTTGAGAAAGT</p>

	<p>TGGGATGCCTCAGGTAAATGGATAGTCTCCGTGGGGGCCGTTTTTGCT CTGTGCACCAGTTTGTCTGGGGTCAATGTTCCCGATGGCGCGGATTTATA CGCGATGGCTGAGGATGGTCTCATCTACACATTTTTGGCGCAAATCAAC AAAAAAACACTTACGCCATTGTTTCGCCACATTCGTGTCAGGAGTTTTGG CAGGAATAATATCGGCTATTTTTAACCTAACGCAGCTAATCGACATGATG TCCATCGGCACCCCTCCTCGCTTACTCCATCGTTTCATTGTGCATTTTGCTT TTAAGGTACCGAAAATACGAGATCAGCGAGGAAACGAAACCAGGCCGT AATGAGCCTGCAGTCAATCATGAAGAACCAAAGAAAGAATATCCAGGC TTCATTTCCGGATTGTTGAACCTTGAAAATGAACGGCGGGCCACGGATT TCTCGGAGGCGATCTCGAAGATTTTAATTGGCACTTTTTGTATTTTATGTT TCATGCATGTAGGAGGTCTAATTTTGATGGAACGAAGAATGCGATTCTGA AATCAACTTTTGGTTCAAAGCATACCTCATTGGTGTAGGAATTTACTTG TGATCAGCGTGATTCTCCTATGGCGACAGCCTCAGGCAAACACAGAAAA ACTAACTTTTACAGCTCCATTGATGCCAATTGTACCTACTTTAAGTATTTA CGTGAACACATACCTAATGTCAAAGCTGGATAAAGCAACATGGATCAGA TTTGTGTCTGGCTTTTATTAGGTCTCTTAGTCTATATGTGTTATGGGCTC AGGCACAGCAAGGAAGGAAAGAATAGATTTATTGCAGCTGAAAAGAAG GAAAAGATCTCAAAAAGTTAG</p>
BtAPC11	<p>ATGTACATCGAAGTATTCAGTGGCAAAAAGGCCGAAGAAGGAAAACCG GCCAAAGGCGTCCAACCTCAGAGGGAGCTGGGGCTAATGAGCGCTGTG AATTTGATTCTCAGTGTTCATGATTGGTTCTGGAATTTTTGTCTCTCCAAC ACGAGCTCTGAAGGAGGCCGGATCCATCGGAATGGCCCTCATTGTTTGG GCTCTATGTGGAACCATCTCCATGCTAGGTGCGTTGTCTTATGCTGAGCT TGGCACTGTTGTTAACAAATCCGGAGCTGAGTACTCTTACTATCGAGAA GCATTTGGACCCCTCCACAAATTTGGGGACCACTCCTAGTTTCATCAA TTGTTGGGTTTCAATCGTATTTGTCCGCCCTGCAGAGATTGCTATAATCAT CCTGACTTTTGCGGAATACTTTACTCAATTACTTAACCCATTATCCCACC AAATGAAATTGATAATTACTATGATAGAAAGAAGATAGTCGCCATCGCAG CTCTTTTTATTATCACAGCAATCAACTTCTTTAGTGTCAAAGTGTATGTTA AGATTGAGAATATTTCTCATCATTCAAAGTTGCTGCTTGTCTCCTTGTC TAGGCTGTGGTCTCTACTACATTTTCATTGGGAAAACCTCAAACCTTGA AAATCCATTCAAAGGATCAGATTTATCGCCAAGAGCTTTTGCAGTGGCAT TTACCATGGTCTTTGGGCTTATGATGGCTGGTCCTCAGTGACTACTGTC ACAGAAGAAATTAAGAAACCTAATAAAAACATCCCCAGAGCAGTCATA ATTGCTGTGCCTTTGGTCACAATGTTGTACTGTTTCATGAATGTCTCTTAC ATGACAGTTCTGAGCGTTCCGGAGTTGATTCAAGCCAAAGCTGTTGCCA ACGAAGTCGGTGTGAAAGTTTTGGGTCAATTTCTCCTGTTAATCCCAATG GGTGTGCACTTTCAACGTTTGGTGTGCTCTTAGCGTGCAATTTGGAGT AACCAGATTATGTTACTCAGCAGCTAAAAACGGACACATGATGGAATA TTTTCTATGTTCACTCGAAAAGACTTACCCAGCTCCAGCTGTGCTTTT GCAGGGTGTCTGTGTCTGGTGTGCATTTTGGCTGGAGATATAATTACCC TAATTGAATTCGCCAGTTTCTCGTCTGGACATTCTATGGTCTTGCCATG GTCGCCTTAATTGTTATGAGATACACGAAAAAAGATGTTTCTAGACCATG GAAAGTACCAATTGTTATTCCTATTTTTGTTATGATCATCGCCTCATGTTT</p>

	GGCAATTATTCCAATTGCAATGAAGCCTCAACCTCAGTACCTGATAGCCG TTGGATTCCTTATTTCTGGATTTGTTGTCTACATTCCTTTCACTTACTTCCA GAAGAAATTATTCGGCGCAGATATGTTACGAAAGCAGTCAAGTCAGTG ATGAACGTTCAACCTCCTGACCAAGATCAAGAAGTCAATCGCCAAAAAG ACAGCCCAGCTTAATGATGATCAGTCTGATCCAAAAGAGGCTCTGTGTG TTGTTTCTCTTCTGTCAGAAACCAAAGACGATTCGTGTTGCGATGAGCC TTGCTGTGACGACTCATGTCACAAAAAATCGTGTTGTGACAAATCGTGC CTTGAAAAATCGTGTTGTAACGAATCGTGTCTCGAAAAATCGTGTTGTA ACGAATCGTGTCTCGAAAAATCGTGTTGTGACGAATCGTGTCCACGTCA ATAA
BtAPC12	ATGACGTCCCGCAACGCGACGGACGTGAAGGCGAAGCTGCCCGTGGAG GTGGACGACGAGAAGGTCCAGCTGAAGCGGAAGATCACGCTGCCCAA CGGAGTGGCCCTCATCGTCGGCACCATCATCGGCTCCGGCATCTTCGTG TCCCCACCGGCGTCTTCCAATATAACGGGTCAGTGGGCTCGTCGCTGG TGATCTGGACGCTATGCGGGATCTTCTCGACGATCGGGGCCCTGTGCTA CGCGGAGCTCGGGACTTGCATCTCGCGCTCGGGCGGCGACTACGCCAC ATCCTCGAGGCGTTCGGCCCCGCTGCCGGCCTTCCTCCGCCTATGGTCGG CCCTCCTCATCATCCGGCCCCACCACCAGGCCATCGTCGCCATCACCTTC GCCAGTACGCCGCCAAACCTTCTTCCCAGGGGACTGCAAACCCCCG GAGCAGGCCGTCACCATCTAGCTGCCGTCTGCCTTTGTCTCCTGACCT CCATCAACTGTCTTAGCGTGCGATGGTCCATGCAAGTTCAAAGCGTCTT CACCACCGCGAAACTCTTCGCCCTGGCTGCCATCGTTTTCTTCGGCGTT GGTCACATCCTGCTCGGTAACACGGAAAACCTTCGATCATGCCTTCGACG GGGATTACAACCCAGCCAACATCGCACTCGCCTTTTACTCGGGTCTCTT CGCGTTTGGCGGATGGAACATCTTAATTTGTTGTGGACGAGCTACAA GATCCTTTCAAGAATCTACCGCGAGCTATATGGATAGCGATGCCGATCGT AACAAATTGTGTATGTGACAGCAAATCTGGCCTACTTTGCCGTGGTCCCT GCTCATGAAATGCTCACCTCGCCAGCTGTTGCAGTCTCATTTGGGGACC GTATGTTTCGGACAAGCACGCTGGGCTGTCCCTGTTTTTGTGGCCTTGT AACATTTGGAGGAGTGAATGGTATTTTGTTCACATCAGCTCGTCTGTTTG TCACTGGTGCTCAAGAGGGACATCTTCCCTCCAATATTCTCCTTCATACAC GTAAAAAGATGCACTCCAATTCCTTCCCTTCTCTTCACATGTTTTATGTCT CTCTTAATGTTGTGTTCTACCAATGATTTGTTCTGATCAACTACTTCAGT CAAGTTTTGTGGCTGTCAGTTGGAGTATGCATAGCAGGTCTCTTGTA GCGCCACACCAAACCTGACATGCCACGCCCCATCAGAGTGCACACAGC TCTACCCATTATGTTCCCTCATTTGCTGTGTCTTCTTGGTGTCTGTGCCTGT CGTGGCAGAGCCATTTAACACAATCGTTGGATTACTTATAATTCTCTCTG GAGTGCCTGTGTA CTACTACATTGGTATCAAATGGAAGACAAAACCATTCGC ATTGAAATCAGCACACAATGACTTCACTGTTTTCTTACAAAAAGCACTAT TCGTGCTGAGCCCAGAAGAGTCAGAAAATCCTGTCAGTCTCTTGTGTAC TACATTGGTATCAAATGGAAGACAAAACCATTTGCATTGA
BtAPC13	ATGTTCCCCCGAATGTTAAGGTGCTACTAACAAAATTCGCCTCGGTTGT TACGCGGCTGAAATCGGAAGACTCAGTGGATCTAGAATCAAACAAGCC GAAACCGAAGTTGGCGAGAGTGCTGACCGTTCTTGATCTGACAGCGTT

	<p>GGGAATCGGGTCAACTCTTGGTGTTGGTTCCTACGTCTTACCGGGAGAG GTCGCTCGCAATACAGCTGGGCCTGCTGTCACTGTCTCTTTCTTCATTGC TGCTGTTGTCTCCATTCTTGCCGCTCTTTGTTATGCCGAGTTTGCAGCTC GAGTTCCTAAAGCAGGATCAGCATAACGTTTACAGTTATATGACTGTCCGC GAGTTCTGCGCTTTCGTCATAGGCTGGAATCTCATCTTAGAATATGTCAT CGGGACGGCCAGTGTTGCAAAGGCACTGTCCGGGATACCTGGATGCCCT GACAGGAAAAGTGTTGCAAACGTACATGTTGCAACATTATCCGATGAAT GTCAGTTTTCTCGGTCTTATCCAGATTGATCTCATTCTCCGTCATCATG CTACTTTCATTTGTGTTAGCATGGGGCGTTAAAGAATCAACAATGCTCAA TAATATTTTTACTGCTTTGAACCTAACCACGGTTGGCATCATAATTATTGC TGGGATAACAGTAGCCAAGCCTTCCAACCTGGTTCATCGCGAAAAGAAGAT TTACCCGTGGACCCAACTCAAATAACAACCCAGGAGAAGGAGGTTTC ATGCCGTTTGGCTGGACTGGTGTCTTAGTTGGAGCAGCTACTTGTTCCTA CTCTTTCATTTGGGTTGACTGCATAGCAACAACAGGGGAAGAGGCGAA AAACCCCAAAAAGACTATTCTCTGGCCATCGTTTTGTCTCTGTTGATAA TTTTCTGCGTGTATTTTGAATATCTGCAGTTCTCACCATGATGTGGCCTT ATTATGACCAGGATCCAGCGGCTCCATTCCCTTCAGTGTTGAGAAAGT TGGGATGCCTCAGGTTAAATGGATAGTCTCCGTGGGGGCCGTTTTGCT CTGTGCACCAGTTTGTGGGGTCAATGTTCCGATGGCGCGGATTTTATAC GCTATGGCTGAGGATGGTCTTATCTACACATTTTTGGCGCAAATCAACAA GAAAACACTTAATGTTCCCGATGGCGCGGATTTTATACGCGATGGCTGA GGATGGTCTCATCTACACATTTTTGGCGCAAATCAACAAAAAACACTT ACGCCATTGTTGCCCACATTCGTGTCAGGAGTTTTGGCAGGAATAATATC GGCTATTTTTAACCTAACGCAGCTAATCGACATGATGTCCATCGGCACCC TCCTCGCTTACTCCATCGTTTCATTGTGCATTTTGTCTTTAAGGTACCGAA AATACGAGATCAGCGAGGAAACGAAACCAGGCCGTAATGAGCCTGCAG TCAATCATGAAGAACCAAAGAAAGAATATCCAGGCTTCATTTCCGGATT GTTGAACCTTGAAAATGAACGGCGGGCCACGGATTTCTCGGAGGCGAT CTCGAAGATTTAATTGGCACTTTTTGTATTTTATGTTTCATGCATGTAGG AGGTCTAATTTTATGGAACGAAGAATGCGATTCGAAATCAACTTTTGG TTCAAAGCATACCTCATTGGTGTAGGAATTTTACTTGTGATCAGCGTGAT TCTCCTATGGCGACAGCCTCAGGCAAACACAGAAAACTAACTTTTACA GCTCCATTGATGCCAATTGTACCTACTTTAAGTATTTACGTGAACACATAC CTAATGTCAAAGCTGGATAAAGCAACATGGATCAGATTTGTTGTCTGGC TTTTATTAGGTCTCTTAGTCTATATGTGTTATGGGCTCAGGCACAGCAAG GAAGGAAAGAATAGATTTATTGCAGCTGAAAAGAAGGAAAAGATCTCA AAAAGTTAG</p>
BtAPC14	<p>ATGACGTCCCGCAACGCGACGGACGTGAAGGCGAAGCTGCCCGTGGAG GTGGACGACGAGAAGGTCCAGCTGAAGCGGAAGATCACGCTGCCCAA CGGAGTGGCCCTCATCGTCGGCACCATCATCGGCTCCGGCATCTTCGTG TCCCCACCGGCGTCTTCCAATATACCGGGTCAGTGGGCTCGTCGCTGG TGATCTGGACGCTATGCGGGATCTTCTCGACGATCGGGGCCCTGTGCTA CGCGGAGCTCGGGACTTGCATCTCGCGTTCGGGCGGCGACTACGCCTAC ATCCTCGAGGCGTTCGGCCCCGCTGCCGGCCTTCTCCGCCTATGGTCCG</p>

CCCTCCTCATCATCCGGCCCACCACCCAGGCCATCGTCGCCATCACCTTC
GCCCAGTACGCCGCCAAACCCTTCTTCCCAGGGGACTGCAAACCCCCG
GAGCAGGCCGTACCATCCTCGCTGCCGCCTGCCTTTGCCTACTGACCT
CCATCAACTGTCTTAGCGTGCGATGGTCCATGCAAGTTCAAAGCGTCTT
CACCACCGCGAAACTCTTCGCCCTGGCTGCCATCGTTTTCTTCGGCGTC
GGTCACATCCTGCTCGGTAACACGGAAAACCTTCGATCATGCCTTCGACG
GGGATTACAACCCAGCCAACATCGCACTTGCCTTTTATTCCGGGTCTCTTC
GCGTTTGGCGGATGGAACCTATCTTAATTTTCGTTGTGGACGAGCTACAAG
ATCCTTTCAAGAATCTACCGCGAGCTATATGGATAGCGATGCCGATCGTA
ACAATTGTGTATGTGACAGCAAATCTGGCCTACTTTGCCGTGGTCCCTGC
TCATGAAATGCTCACCTCGCCAGCTGTTGCAGTTAGTTTCCACTTAAAC
ACGAAATTCATCAAATTTCCGACACCTGTAAATTCCTCATTGCCTCATTG
GGCTCAAAAATTAACCTGGGCAAAGGGTGTGGAGGGGCACCCTTTGCT
CAAGGGGAGCAAAGGGGAAGGGGTGAAGGGGGCACCGTACCTTGAAA
GTGTGTCATTTGGGGACCGTATGTTCCGACAAGCACGCTGGGCTGTCCC
TGTTTTTGTCCTTGTCACATTTGGAGGAGTGAATGGTATTTTGTTCA
CATCAGCTCGTCTGTTTGTCACTGGTGCTCAAGAGGGACATCTTCCTCC
AATATTCTCCTTCATACACGTAAAAAGATGCACTCCAATTCCTTCCCTTCT
CTTACATGTTTTATGTCTCTCTTAATGTTGTGTTCTACCAATGTATTTGTT
CTGATCAACTACTTCAGTCAAGTTTTGTGGCTGTCAGTTGGAGTATGCAT
AGCAGGTCTCTTGTACTTGCGCCACACCAAACCTGACATGCCACGCCCC
ATCAGAGTGCACACAGCTCTACCCATTATGTTTCCTCATTGCTGTGTCTT
CTTGGTGTCTGTGCCTGTCGTGGCAGAGCCATTTAACACAATCGTTGGA
TTACTTATAATTCTCTCTGGAGTGCCTGTGTACTACATTGGTATCAAATGG
AAGACAAAACCATTTCGATTGAAATCAGCACACAATGACTTCACTGTTT
TCTTACAAAAGCACTATTCGTGCTGAGCCCAGAAGAGTCAGAAAATCC
TGTCAGTCTCTAG

Table S9. Amino acid sequences of the AAAP transporters of the eight species.

Gene	Amino acid sequences
BtAAAP1	MEMKSSESASNVTQVMTRSQQEKVFPPRQFKHATSDFETFLHIVKSSLGS GLLATPDAFKNAGIGLGLVGMVAVLVITHATSILVRSSQAICCTLQKPHLT YADTAEYAFEYGNIPAVRPYAGFARKFVKVFSVITYYGVNTVYVVLIASSA KQLIENHIEWSLNIRWYILLVLLVLLPLGLIIKLMKFLAPFSAIANVCLFVGLG IILFKIMDDLPLSERPFVAPIEKVPLFFATMLFGLEGIGTVLPVENEMKNPD HFLGWTGVLSVSMFFIGLVNAIVGLFGYWKYGDAVCGSISLNMEQDWLS ELVKFLIAVAILFTYGLQMTVTSEVVWDSVQDYFHKDNSKVAYYCVRASL VVGTAIVAAIIPNLAPIISLFGAIGFMSMLGLFCPAVIDFVLFYDVEKGLTDWR CWKNILLIIAASFATFLGAYTSLADIISNYS
BtAAAP2	MSELDVIQFSFFQEPSTGEPQATELDTFLPQDGSNKDGSSAKYKVQVLPTR PRDAEAAAAGTGHHEKGYWDPFKERKLDHATTDGETLTHLLKASLGTGIL AMPAAFKNAGMITGIFATIIVSLVCTHCSYVLVKCAHSLYHRKKVTTMTFA DVGEVAFANGPPWGRKFSKWARFSILFGLFLAYFGTCSVYTVIIAKNFKIVI EHHSHYNADIRFYIAVLLVPLILLSWIPNLKYLAPISMLANFLMAGGLGITF WYLVWDLPSVWERPQFASWETLPDFFSTTIFAIEAIGVIMPLENAMETPQH FVGICGVLNRGMSGVTMIYILLGFLGFLKFGDAAQDNITNLDITQIAPQV ANIFVAIAVFCTFGLQFFVCLEIGWDSVKGYFPKRQRFYNYIVRTVLVSGA VFLAIAVPTIGPFINLIGALCFSLLGLIIPVFIEFVITYWDVGFSGSNWIVWKN ILVLIFGVLALVFGSATSIKGIAALYAPQGPVADGFNKTLENLSSYNTTTSV
BtAAAP3	MSDNTPLRILKTNLGIKLLKMKPEERQPLIGVAYPIPISENFDDRAMPRPDI RDSPENLSVNIDGGPMNDQFVNATKEEEVKNDFQSARDLAHPTSNLDTLI HLLKGNIGTGILAMADAFRNAGLYLGLVCTLCLGAICTHCMHMLIGCEKE LCERTSVPALDFAEVAETAFAFATGPERLRKFSTVFRMLVNTFLIITQIGFCCAY FVFSQNLHDEIKYFFFDIELIWLILMLVPMILLNWIKSLKYMMPISLLAS ILTTSGLGIIFYVVLQDLPNTNTVPKVASWGQLPLYFGTAVYAFEGIGVILPL ENSMKSPEHMRGYVGILNTGMVIVTCLYTAVGFFGYLKYGDAATRGSITF YMGAELFASHVVRTMALAIFLSYCLQFYVPANIIWPQLVSRFAFLQPEER QYFGEYIFRTLVLFTFLAVIIPDLSAVISLVGAVSSSTLALIFPPLLEMVTF YEKDFSRYRTLKDLLIMLFGICGFLVGSYTSILNILNPPENPL
BtAAAP4	MPGPGGELKMHNISQNSPEGGNGTKYNEFSINVPHPESPPDGDYDPHTHR VLDAPTTNETLIHLLKGS LGT GILAMPKAFYQAGLLIGTIGTILIGFLCTY CLHVLVRSQYILCKRKRVPILSYPD SMKIALQEGPSGLRMFADASYVIVDG FLIVYQLGICCVYIVFVATTVKQVADELADPIDLRVHMLILLPLILINYVPN LKMLAPFSQVANFITFAGLAITLYIQLDLPVSSRPLVGEPRNYSLVFGTT LFALEAVGVMLALENNMKTPASFGGYGGVNLKGMVIIVFLYVAMGFLGY VKYGELIAGSVTLNLPQGMLAQS VKLIFAVAIFITYALQAYVPVDIIRTY MKQYHSHKNKMLIEYILRTAVVLITFVLAVLIPRLELFISLFGALCLSALGIA FPAIIELCVLWPDQLGTLNYVLWRDVLVIGILALVIGTSISVNDIIVSFQ
BtAAAP5	MHSNSVITLSNSIIGVSILAMPFCFQQCGIILSLIILFFISIISRLACHFLLKSAV ISRCRSFEFLAFHMFPGAGKTVIELSIVGFLMGSCVAFFVVVVDLGPVAVKS VLNLEMSVQALRPALLIGVAVFIILPLGLVRDIDSLSSICTLSIGFYIILVLKII

	<p>AEATPPIFDSSWADKVNYPWPAGILQCLPIFSSALSQCQTQLFEIFGSYLN LDKINGAIKSSVNMCTAVYMGVGLFGYIAFCSQPLTGNALMNFPPSVTGD IKLGFVVSVALSFPLVIFPCRASLYSFLYHQNHSSHYELLTRNTGGSSQNV LLIVTVSLILALLVPSIELVLGLLGSTIGVILCYILPSVFFTRLLKKNTER LAQVVIIVGVFIMVLGTYTNLFAAEKAISGPEKDMQLNIAISPEKEFPSEIK HGLEEMREHSMEAFHNVPEKLHLDQANLDLKENADQVKESDDKKNQVS LVDSNKDLQSQGDAKKEPVKTKSENLMKATRKPEPEPVEPVETKHFND PQKIEVDANLKPDLPENMNQAKSEAVKKEIIVDQPKIVADESLRQEKAPEK QVESPNEINVPKKDKEKIYIPKGGKIFKLLHEIPKPNPPSKKDSVNNVNL EGNLRPEIMDKLKDTPPLPIALQKNINVFVSLIPEKTPENDDKVKNRELL DHQKNNEPHPRERRDVLTLAEEELSNGKGISVKGIHENEGSETVKLVTRSL GSVDTDVIENSEKVVILSEVGDKDLKMKNNGENETSDKSHSSLSASKAD FILDVEEYQSAKLSPDFGNQKSAKFTAKPEHNLGNKLIDESTQNLDfsp DIQKSDQFAIKSDFNFDNQKSGSSVKSVEPGSQKYDASIPKTDLNI SFH QSDESAPKSDLNFDNHQGMPEVKTSKIPSSDSNLVNSQSLPELQNHNSAP SSDSNLGNERNNSASKLKMSMDNASGDITLKETLRSVNSVEMKGVDS CPKNSSAKKSIQPNRTSNSSKSNSSDKLLNIQAPDRLSSPDNIFNDIESVN VEISNAFHDPKSFKRDLKSVELVAENDEQILDNILSVRKEIDSISKTIEIK NDR</p>
BtAAAP6	<p>MGNEKMEKGEYLEKTQSMVTIDGSFNSTSTLKLTDNGTKKIEADDTYEP FSNRDMTHATSNNGAFFHLLKSSLGSGILAMPNAFKNGGLIFGIVGTILT GIICTYCVHMLVICSQILSARVKKPTLGFETAFAEAFQTGPTKYKQWAGFA RE FVYGALFATYYFGNTVYVLIATSFKQVMDSNLGLDWDIRIYILFLAL PLVPVGIIRTLKYLVPFSAMATVFIMVGLGFTIAYTLEDLPPVTSRHYFTS WHQLPLFFSTVLFAMEGIGTVIPIENSMKNPGHFLGCPGVLNIAIIIVN LYGCVGFFGYLKYGDETKGSVTLNLPATALAESIKILVALSILFTYGLQFT VPTEIVWKRISHKFSEENQEKGYYIMRAF MILGTVVAAAIPNLSPAILV GAICFSTLGLFCPAIIEITIFWDDDVATPGIPWRWIKNMVLVVVSIFALV SGTYASHIEMSH EYS</p>
BtAAAP7	<p>MERLKDSVQPDYQATSPRTPLRINEPSNDSASPSTNANARSPNFETGAPQ NAGINVLTA AVFVAGEMAGSGVLALPKAVVDSGWIGIFIVIICINAGYGG SR LGECWAILEERYPEYRGNTRNPYATIAERAVGKWGSYLVSVCMQITL FGASIVYLLAAQLVQDLLIVVFPVSGFCWWFLIFAVGLIPAMWLGSPKDF WLVGVGALLSTTVAVVFIATQMLIDGLNLEKLPRHRPHSFKEFFLAFGTIL FAFGGASTFPTIQNDMVHREKFSKSVMIAFIAITGLYSPLVIGGYIYGDSI QPNV VMSLSHTTLVSLANIAMAIHLILAFLIINPVCQDLEEMLQVPPEF CLKRCIVRTCMIMLMIIIVGATVPRFSKILSLVGGSTITLTTFVLPNYFY LKLSDQRAPNWPVREVPLHMRVYMYELIGIGLVGGCCSTYSALIDMVGP DPSFTKPCYWP N</p>
BtAAAP8	<p>MGEIKK PANEKTYILEQQFQSPVSDGPNSDTEQLFRNEKDPHKSGLEVA SF NYVNSIIGSGVIGIPYAFKEAGFGLGIMMLAFVALVTDYSLVLMVRS AHISGVYSYQGLMEAAFGSAGFIILSFLQFIYPIAMVSYNIVVGDITIKV LMRVFNLYPHSLLARRDVVALATIFVTLPLCLMKNLAGLAKASILSMVFV FFIL LAIFIRFFTLQDVVPPSFDAWEFANWDVIPALGIMAFAMCHHN VFLLYESI ERADQTKWDKITHFSLSVSFAISAMFGVAGYATFTGYSQGD LLENYCWDD</p>

	DLMNLARLFFSCTILFTYPIECLVTRSVIYQIMGNENNVSDLQHLLITCGIV GTTFLLSIMTDCLGVVLELNGVLSAVPLAFILPAASYLKLEPGSVFSDRKL ALGLAIFGCLVAVIGAVLIILDFDSEDTC SHGRVMPYCLNHTLYT
BtAAAP9	MTDGFDDHPSNRPRRKSLSSESQPLLSSDHSCTSLYDPTTTGVFRYDSE SEWDNEANKQDVQSKKETNSLGAFRSISLQHKKPDVPVFNKAFSYTPAP RYAEFWRSEPVTTCSFPVISQSMHKVATQSSIVTIFSIWNTMMGTSLAMP WGVGRAGILMSVFLFFMMGMICLYTAQKMIQVQKKYGDKHVGEMAELC RVLLGRPGEIIAKVSSIIVLLGANIIYVLMNSFLYYSVTFIYHFGDGIIVSPN STLSGVEACPRNVTPVVEYQRVPGSTFDQLWQLNNTVPLFLALILGPLL NFKSVTFFTKFNSFGTLSAMYLVLFVLVKSIFWGLHVDHEDSPYFSPLV SSNLAATSGMLPLSFFIHSIVITLMRHNKDQTKNDRDLSIAYGLVGLTYCLV GVLFYLCFPLAKSCIDDNLLNLFQNRDLMTVIARGFIFFQLLTVFPLIMYM LRIQIFAAMQLNHYP SLFHVILLNITIVGICVSFAVFFPKIGALLRFTGALGG FICVFTLPCLLYIASEIKEDRLTWQTVVVHSHIPLTGFINVAQFFVND
BtAAAP10	MDTQLATIQTTLLEIKTAESNSCADLVPRKEEQKEKNPNTREFKHATDFET FLHIIKASLGSGLLATPDAFKNAGIALGLIGTAMAVAAITHTTAMLVRNSQT LCYMLKKPFLTYFETAEYAFEYGNLPAAKGHGGLARRFVKLFLSLITYYGV NTIYMVLIASIKQLVETRIDTQWNIRWYILLALIILPVGVIKLMKFLAPFS AFANVCLFGGLGIILCRILRDLPPVSSRPLVAPIEKIPLFISTILFGCEGIGIVLP AENEMKNPDHFLGWTGVLSWSMFCIGISNAIVGFFGYLKFGDEVQGSISL NMQDDWISELVKILIALAILFSYGLQMTVTSEVVWDSVKDRFHKDNSKK AYYCVRSSLVVGTA VVAVIPNLAPIISLFGAVGFSMMGLFCPAVIDLVLYY DPERGWTDWRCLKNILLMLAALAATLLGTYSMVDIITNYE
BtAAAP11	MSDGGVGVADWASDPSARSTSRPGRSALVSPEIQIERVSPEALHRGPVTL ATHNMRLTLEGKNVRPIITEFDPKKS GVRTERADLVMVKYKCQSN GVPIT MTTGSTLPLVSSTNKDAESGGYNPFHRKVAHPTSDMETFIHLLKGS LGT GILAMPLAFSNAGLWFGLAATFTIGLICTYCVHILVKSSHILCRMKVP SLS FADIAEVAFLAGPTSVQGFAAFSRSMVNLFLVIDLLGCCCVYLVFVAKNIK QVVVDVYAGAEFDVRWYILSILPLLIANLIRNLKYLAPFSMISNLLVGIGITI TFYYMFKDLPSLDSVPHQHFSSEQLPLFFGTAFI ALEGIGVVMPL ENNMK KPQHLIGCPGVLNTGMFLVISLYSGVGGFYLYKYGSKTEPSITLNL PQHELL GQSVKLMMAVAIFLTYALQFYVPFEIHWKSVKHRFTSKPKTAEYSLRVGLV VGTVVLAITPELGPFISLVGALCLSTLGLMFP AIIELVIYWE EPGMGAYNW RLYKNLAIIFGLLGLVTGTYSLSWEMGMGNAH
BtAAAP12	MDEGYSTWTGLLYVFNLIVGTGVLTLP HAFVQAGWVFGILLLSALAF TSY MAVTFVIEAMSRANAVKMTLRRLRHLQKSKAAFLKQIQGDS DSVSGDEE GDHSRIPPETSPLVPNEYIDKFPAAPRSLFSVDTKVEMVEMAELFFPPWGK VFFFINFCLYLCGDLTVYAAAVGKSLVDVSCMTTSINSTHPDNELCWEGAT ITRRGAYAIFLLL FVLTLPFAFFNVQKTKYIQMFTTLMRTLAFSVMIVLSV QRIIDPTQDHGAPPVVRPAGMPALFGACIYSFMCHHSLPALITPIKDKSKLS RLLSFDFILILTFYFILILTSIFAFP NIEQLLTLNFRPDFNTKLDLEIIDYFLMLF PVLTLASAFP IAITLRYNLQAASVGEDGPWVVRRLVLP TIAVTVP IIVALLF TNIETIVGINGSYAGAGIQYVIPVFLLLRSRALTPEALKNEVNPHQSPFSSPI WPRALLLWAVCCVIFVSVNLADKFLNVS VF

BtAAAP13	MATDQKTNPQFGSDEEIGYVGDSMKAPIIKDDYDPDKDTGDKNLTTYFE TLIHMLKVSLGTGILAMPKAFSNAGYLLGIIGTLAVGALSTYTMQMLVRS EYELCKKRRVPRMTYAQTFEAAFAEGPKTFRPLAGAAGVVCKIILFLFQG GACCVYIVFVAENLKAVGDQYFGKTDIRLYMAYLLGPLILICWLRNFKYL APVSSFGNVMTLICYCITFYMLSDLPSFSTRQAVVELDRFPLFELDRFPLF IGTALFAMEAVGVVMPKSEMKNPRQFRGWFGVLNLCAMVPITILYLLVGL AGYLKYGDSARGSSISLNLDPNEVPAQCCKVMLAFSVYICYAICAYVTFQM LWGDYLEPKFEESKKKLVYEYIGRTLVLVTFGLAVSIPNLELFISLIGALGL ANLGVAFPTIMELLTRWDKYHGCLFALFLLKNICLLFVAVYAFFIGGSTSIIN IYKKVIVGS
BtAAAP14	MASDQKNGSTPAQQERGDVIKTPGDTDYDPDEDLGEKNLTTYFETLLHM LKVSLGTGVLAMPKAFANAGYLLGMIGTIIVGVLCYTTQMLVQSEYELS RRLRVPSMTYPQTFEAAFSEGPKRRCRPFKAAGVTCNLILFLLQCGLSCVY MVFVADNLKAVLDQYIGTTDIRLYMACLLGPLILCWFGLNLYLAPLSFFG NSMTMICYCITFWYVLTDLPSFSTRKAVVDLKQFPLFIGTALFAMEAISVVI PLKNEMKRPAQFRGSFVNLCSMVPITILYLLVGLGGYLYGDAARGSSISL NLPTSEVPAQCCKLMLAFSVLISNTVLTYYVTSTILWEEFLKSRFENSKRKV VWELSARAFLVLATFVIAASIPNLELFISLIGALGLANLGLAFPVIAETLTFW DRYHGCWFFFILKNICLLAAIYAFFIGGATSITIYEKLMGDTLF
BtAAAP15	MTKTESKDMMSKISEAERNKSKTKIIDDKYDYDPYDQPAPENATSYADSL TILLKFSLGTGILAMPRSFHNAGYVVGFIGTMVIGFLTTYTIHMIMSAYEYEL CKRKRVPNMSYPETMEAAFEYGPRKMRKFKNAAWFMCYIFLLIYQTGTS CIYLVFIADNLKEELDLFFGGSTDIRMVIVYLLIPLILISMVRNLKLISPLASL GHIFVMICFSIIFYIFRDIPNIAERKPVGTMQGIPLFFGTVLFAMEAIGSVM PVKNEMAKPEQFTSRFGVINMAMVPIVLLYTIIGLFGYLQYGDKTKGSITL NMPQHNLFGHTVKLLLAASVYINYAISNYVIYDLVWPCLTSKMEKNSHKL SYEYCVRIAIVLITFGFSIAIPNLELFISLGLSLCLVNLGIFFPVILQTLTFWDE FRGPRFYTFLIKNIFLIIAILGFVIGVGRSSIEIYNTVILPSFS
BtAAAP16	MGFKEKSDSQAVLDVEVSGDSPDLDEHYEPHDYQPPGKSASYCEALFILV KASLGTGILCMPRAFYNAGYVVLGAVGTIFAGVISVLSVHLIANTEHELRRR KRIPRMTYPETLEASFEMGPGNVKRYKGIARVVCTVALTMQAFGSDCVYA IFIAVNIKEICDHFFTPAPLKFYLLCCLLPFIVICWIRNLKYLAPGSTIGTACSI CCIGAAYYIFSQPITTEGRKTVGSLRDFALFFGAALFAQGDFGVVPLKN RMTKPAQFGSVCVNVAMIPDVFLYVIIGVFGYLAYGDNTRDPITLNMP QTGFAGDLIRFLLAVSVFAMYPICNYVVIELLWDKNLKLKLQDVKHRKSW EYAFRTAVTCANILFCIAVPSLELVMSLVGSLMVPALSLWFPAIMYTLTFWD EYRGKFAFFLLRSSILLTGVFALVSVSITVFEIYETML
BtAAAP17	MGLEKKSESRTVLDVGVNEDIPDFSDENYEPHDHEPDGKSASYFQAFSVL MKASLGTGILGMPRAFYKAGYILGTISTIISGGLTILSVHLIARTEHELRRR RIPRMTYPEVAEAAFEKGVFRRFKRVS RNICFYGLVLTEFGTTAAAYAIAE NLKAVCDNNFSPAPLRFYLLCCLLPVLCWIKNLKSLAPVTSLGTCCSIG CIGTIYYIFISQPISLEHRKASGSFNDFALSFGTTLFALEAFPEILPIKNRMTK PGEFGSTFGVLNAAMVPNTALCVVFGVFGYLAYGKNTLSPITLNLPQTGM VGD LIRFLLGASIFMSYPIGNYVVVELLWHKNLKLRYEKIPDYWEYVFRT

	CVTCSNILCCIAVPNLELIMSLVGSMLMVPALWLPALMHTITFWNEYTGIK FLIYVIGPFISSYTISIMLNVCLVTILLIL
BtAAAP18	MLYFADPAIAKMEGNCNRGKMGFNKTTDSQAALDVDLNEKNPEIGENYE PYNHEPAGKTASYIEALLILIKASVGTGVLGMPRAFYNAGYVLGTMGTVF AGILTTVTVHLISNSEHELCCRKRIPQMSYPETVEAAFEHGPNSKRFKNT ARIICQLALVMLEFGADCAYAIFIADNIKEICDHIFSPAPVRFYLLCLLGPLIF MCWIRNLKFLAPGSTLGTGCAIGCVGVVVFYFIFSQPITLEGRKAAGSLKDF ALFFGQVLFAGAYGMVVS LKNRMRRPASFGSPFGVNVAMVPNLVLYVI MGFFGYLAYGNQTKSSVTLNLPQTGFIGDLIRILMAGSIFTTYPLCNYIVVE QLWHKNLALRFEDNKRIVFWEYVVRTALTCANIACCIAIPNLELVMAFTGS LMVPTLGIWFPSIYTLTFWNKYTGIKFAFFLSRTIIIMIVGVFASVISLSTTV REIYGTAFA
BtAAAP19	MELGCNRRGKMGFNKTTDSQAALDVDLNEKNPEIGENYEPYNHEPAGKTA SYIEALLILIKASVGTGVLGMPRAFYNAGYILGTMGTVFAGILTTVTVHLIS NSEHELCCRKRIPQMTYPETVEAAFEYGPNSRRFKNTARIICYSALVLE FGADCAYAIFIADNIKEICDHIFSPAPVRFYLLCLLGPLILMCWIRNLKFLAP GSTLGTGCAIGCVGVVVFYFIFSQPITLEGRKAAGSLKDFALFFGQVLFAG AFGMVVPLKNRMRRPASFGSPFGVNVAMVPNLVLYVIMGFFGYLAYGN QTKSSVTLNLPQTGFIGDLIRILMAGSIFTTYPLCNYIVVEQLWHKNLALRF EDNKRIVFWEYVVRTALTCANIACCIAIPNLELVMAFTGSLMVPTLGIWFPS IYTLTFWNKYTGIKFAFFLSRTIIIMLVGVFASVISLSTTVREIYGTAFA
BtAAAP20	MRFNKNSDSQAADVEGSDSVTNNSDDYEPHDQLPPAKSASYIESLFILIK ATLGTGILGMPRAFYTAGYVLGAVGTLFAGILTTGSMILIGKSEHELCCRK RIPRMTYPETMEAAFELGPGCLRRFKGAARFLTTAIVMLEFGTDCAAYAIFI AVNIKEICEQHFSAPLRFYLLCLLGPLIVMCWVRNLKYLAPGSTLGSFCA VGCVAAYYYYIFSQPMTLEGKKAAGSVRDFSLFFGQVLFALGAFGVVPL KNKMTRPAQYGSVCGVNAATIPDIFLYIIIIGVFGYLAAGENTQNPITLNM PQTGIVGDLIRILLACSIFTTYPLCNYVVIEQLWHKNLRLWLGDVKNPHQ WEYAFRTVVTCANVLCIVVPSLELVMSLVGSLMVPALGLWFPAIMYTLTF WNEYRGVKFALFLLSIVLALTGMFALVVSLSLSTTLTEIYETVL
BtAAAP21	MTRDNHVRHLHLENRQSVKHGIDNPAMLENGSTEQVCTPEKNEKKVSESK EVLTRITVVKSPSSLEKPLDDDDYPYLHRDVKHPTSYSDTFFHMLKASLG TGILAMPNAFHNAGFTVGTIGTLVIGFLCTYAIHSLIGAGYELCRRRKVPS MTYPQTSEAAFEEGPQWLRWFPTPYAAFTTQLFLILYQIGASCIYVVMASN IKAVCDEYYAETDVRLYMVYILIPILICWIRNLKLLAPFSSAANFVTIVSFG ITFYIYFSDIPHISQRQAVGKVENMPLFFGTVLFAMEAIGVILPLENEMGNP KRFASFGVLTSMIPITLLYTFVGGFGYMKFGEKAEGSITLNLPKDEVLA QSVKMLLAASIYMCYALSCYVAFDLMWNGWIAAKLEKNEHKTFWEYVT RTSIVLVFTFLAVAIPNLELFISLIGALCLATMGIAFPAAIQMLTFWDYYRGS FVLFLTKNMILILIALLGFFIGTSTSLNKIYHEFFLS
BtAAAP22	MSNEEVPLLSGVGGVGKSKCSFKGLSLFFASLCVIDLFGVFPIVALPRAIV DCGWLGLPLAFTVFTLQIYTALLGRSWVMAEMIEPSIVEKSRYPYAALA ELTFNTRMRKFVTFLLDITIFGGGVPNLLVASQNLQILGLKISNFEWDVSYC YWMLLLGVALCPAMWLGSPKDMKWLAASSVCIVVTVGALTWYLLLHEP

	LPPGAVPPDLPEVSWQSLAIAYGILAFQFDIHPMILTVQVDMKKNKLGHA ILAGFLVSGGLSIVTCIIHYLRFGTSINYNILPGLQPHILLYVDAFLVTLQICLS MVGGTALFQDVEDKLGVPRDFNWKRCVVRSSILMTAVLIGEAVPRFDLV MGLLGGALTGPLMFILPPIIHYRLRSILWRKQLIARIDRYEADGARLREELL RKTTLPPQQLSYAPNAFGLVTNDMSTGKEIPTGPASGSFSSETSSSLGSLP QPYLPPSELLDPPLAPRSLVQHLVGLVSTEVDSESVSQLGCCELAMTFVIVG AGITATVVATYYALVGNIAAYATFSPPCIVSVNEASRAIFDELVT
BtAAAP23	MTYFGRFYIPPISAAVNVAWATIKAVIPEDSPCVELIQKMTGQRTGEEAGGA QGKQEPNEHVNFQAQFNGPKATDNTEMATMSGYGSADRGEDEDFGGKQV NFSKSRATTESGCSFDEFGERGRHKINEWQAAWNVTNAIQGMFIVSLPF NVLRRGGYWAIGAMIGTAYICCYTGKILVECLYELDTMTGERVRVRDSYVSI ARECFGPLWGARIVNMAQMIELLMTCILYVVVCGDLLIGTFPEGVIDTRS WMMLVGCFLVPLGFLKSLHHVSTLSFWCTMSHIFINVIILGYCLELPSWG WSKVKWTLLENFPISLGVIVFSYTSQIFLPTLEGNLIDRSKFDWMLDWSH IAAAIFKSLFGYICFLTFQNDTQQVITNNLHSPAFAKGLVNFVLVIKAILSYP PYAAACDLLEKSFFKGRPETRFPTIWHMDGELKVVGLAFRVGIIVGTVLM AILPHFIILMGFIGNFTGTMLSFIWPCYFHLKLGDTLERKTVIFDCFVICL GCLFGIIGIYDSGSAMIKAFEIGLFP
BtAAAP24	MGFNKKTESQNTLDLSVNDEKPEKDLEKEQEEYDPYKQEQTGKTTSYF EALLILIKASLGTGILGMPRAFYNAGYLLGTIGTIVAGVLTQTQTAHMISSTE YELSRKRVPRLTYPETIEAAFELGPGNFRFRKLAGQICYVMILLEFGG DCVYAIFIAENVKAICDHRYGTHSLRWYQTWLMIPLILICWIKNLKYLAPG STLGTGCAVGCFCVYIYFIFSQPIALEGRKAIGSFREFALFFGTALFAMGAF GIVVPLKNKMTNPKRFGGTFGVVNATMIPNMTMYVLMGFFGYLAYGNF TQSSITLNLPTGAIGDVIRILMAGSIFTTYPLCNYVVTDMVWHKWMKLL FGDNKHLKWEYVVRTCLCFTNYLCCIAIPNLELFMSLSGSLCLPALGIFFP IIIHTLTFWHSYTGWRFFFFLFRALIVALGLFAFLVSFSTTVYEIVTSIFLAE DNHV
BtAAAP25	MSNEEVPLLSGVGGGVGNSKCSFKGLSLFFASLCVIDLFGVFPIVALPRAIV DCGWLGLPLAFTVFTLQIYTALLGRSWVMAEMIEPSIVEKSRYPYAALA ELTFNTRMRKFVTFLLDITIFGGGVPNLLVASQNLQILGLKISNFEWDVSYC YWMLLLGVALCPAMWLGSPKDMKWLAASSVCIVVTVGALTWYLLLHEP LPPGAVPPVLPEVSWQSLAIAYGILAFQFDIHPMILTVQVDMKKNKLGHA ILAGFLVSGGLSIVTCIIHYLRFGTSINYNILPGLQPHILLYVDAFLVTLQICLS MVGGTALFQDVEDKLGVPRDFNWKRCVVRSSILMTAVLIGEAVPRFDLV MGLLGGALTGPLMFILPPIIHYRLRSILWRKQLIARIDRYEADGARLREELL RKTTLPPQQLSYAPNAFGLVTNDMSTGKEIPTGPASGSFSSETSSSLGSLP QPYLPPSELLDPPLAPRSLVQHLVGLVSTEVDSESVSQLGCCELAMTFVIVG AGITATVVATYYALVGNIAAYATFSPPCIVSVNEASRAIFDELVT
AaAAAP1 (AAEL00078 0-PA)	MSFLNNLRSLPLPPVKNVLNVAMQTARQTIPSKNKQNDYEQPVGENVGP AAGVRSPPQVPPRPQNVHFAETDGDGTGTTTELNPLNPFTNPKAYYQEGTD QPSAGQYQETGFNQPSDFENGYQAGGYPPRQGSVQSFSDSTFAGGCEGE APGGMKINEYQAAWNVTNAIQGMFIVSLPFAVLRGGYWAIIAMVGIAYIC CYTGKILVQCLYEPDPTGEPVRVRDSYVAIAKVCFGKKIGARVVSIAQIIE

	LLMTCILYVVVCGDLMAGSFPDGDTRSWMMLCGIFLLPLAFLKSLHH VSLLSFWCTMSHLLINAIIVGYCLLEIGDWGWSKVKWRMDFENFPISLGV VFSYTSQIFLPTLEGNMEDRSKFNWMLDWSHIAAAAFKALFGYICFLTQ NDTQQVITNNLHSPSFKGLVNFCLVIKAILSYPFFAACELLERAFRGP KTLFPVWELDGDLDKVGWGLAWRLAVILGTIMMAIFIPHSILMGFIGSFTG TMLSFIWPCYFHLKLGKGLLDQKQRACDYFIIFLGVLFVGVVGIYDSGALI KAFEIGLPF
AaAAP2 (AAEL00111 4-PA)	MERNSVQTVTLMNSIIGVILSMPFCFQKCGVVLSLVLLLSTYITKLVCS YMIKSIIARRKTFEQIAFYAFGSCGKLLVELCVVGYLLGTICIAFVVVGD LGPQIAAKMLAINESSTLRTWVMIVVTAVCIPLGLLRNVDSLSTVCTASLG FYVCLILKUMAESSEQISKAGWFDRLDMWKTEGILQCLPIISMALSCQM LFEVYATMPTTSLDKMSRVIQKSTSLCACIYGLIGFFGYVAFNGHQFSGN LNFSPSYVSDIIGFVLSVAFSFLAIFPCRVSLYSLYKKTTHSDAHMYIPES KFRPLTVAIVCTALVLGWMVPSIEVVIGLVGSTIGVAVCIIPAACYMHICK TNISEKQLAQVMIVFGFFIMILGTIANLEAMNRVPEKKYETGVKEDVVLAP VVNVEK
AaAAP3 (AAEL00142 9-PA)	MSSGSPKKDVLNLDMLQLLSKSSPTRNGDMIVDDNYDPHLHRNRPHPTTF ETLVHLLKGSGLGTGILAMPQAFYNAGYISGFVNTILIGILCTYCLHVLVQA QYILCKRHRVPILTYPISMKMALEEGPACLRRFSPYAVVIVDGMIVYQLGI CCVYIVFVATNIKQLVDVYLNLDVKIHCMLLVPLIGINMIRNLKILAPFSTL ANVITFVGLGMILYVLDLPSLSEMEMVTDIGRFPLFFGTTLFALEAVGVI IALENNMATPKSFGGTFGLNVGMFVIVALYAGMGFLGYWKYGAEALGS LTLNLPEDILSRITRILFAVAIFISYGLQCYVPVDIWNVYLVQKYKDSNNK FVYEMLVRIVVIVTFLLAVAIPRLGLFISLFGALCLSALGIAFPAIMEICVL WPKLGLPGKLVLWKDIIILIFGIIGLVAGTYTSVRDIIYSFQ
AaAAP4 (AAEL00221 4-PA)	MKNEREPLLSTSDNSFDATNNEHQHLLARPDLRSPENMIVDVGNDNDSL SQTASKEDPAYGSASDAYDPSMHRTLEHPTTNMDTMIHLLKGNIGTGILA MPDAFKNAGLYVGLFGTLLMGAICTHMHMLVRCSELCRRLQVPSLNF AEVCSRSFETGPIGLRRYSNLARTLVNMFLVITQLGFCCVYFVFAANLKE VVAHYFFDLDRVYLLMLVPMVLLNLVKNLKLTPVSLVAACLTVAGLA CTFYFVLQDLNTHTVKPFASWAQLPLYFGTAVYAFEGIGIVLPLENNMKT PEDFGGWTGVLNTGMVIVACLYTAVGFFGYLKYGEGVQGSITLNLPGDQF IAQLVRIMMALAIFFSYGLQFYVPISILNPSIKRRLHSEQAQLIGEYLLRVGL VVFTFLLAAMIPNLGAVISLVGAVSSSTLALIFPPLIEIITFWPDGLGKNYVW LWKDIAIMTFGICGFVFGTYTSVAQIINPDLH
AaAAP5 (AAEL00395 6-PA)	MTSTQNRFSFETSKDADDEDEYNPFKQRIRKANSSIGTLIHMVKGSLGTG ILAMPFAFKTGGLVFGILGTMLVALIYAHCVHLLVGTSQKACKRSRIPVLG FAETAENVFANGPFRLRKFAGFAKAYIDYMLLVISYFSVCVYLVFISTTLRD VINYELQIDWSIRIYILLTTCVAFITQVRELKYLVPFSLLANSSIIVVFIITLF YIFKEPVAISNRKFWPELSNLPFFGTAVYAIEGIGIVLPVENKMKQPQHFL QTFGVANFAICFITILYNIVGFFGYATYGEGETKGSVTLNLPNDELLAKSTQL LAAVAILLTLGLYYYYPMEILWKKIGHKIPERRHNLAQVGIRLGIVVAMMG LALTVPQLEPFIFVGSIGSATLALLTPIVLDTVYRWPTGYGWMRWRLKN ILLGAFGLFILAVGTYFSLMDIVAIYE

AaAAAP6 (AAEL00397 0-PA)	MRLHRVHRKFAREGHQRRPGLERPNIHPADDDPHVDRSNSYAQVPS PVLGAGQPVYRCDLWHHAVLHLQDPLVFDDKPNFASFATLPLFFSTVIFAM EGIGVVMPVENSMAKPQHFLGCPGVLNTAMGTVITLYAVIGFFGYVRYGD ISAGSITLNLPTEDILAKIAQLLIAAAILFTFGLQFYVPM DILWKKIHDKIPK DKHNFSQIAIRTGIMILMGGIALAVPDLEPFIGLVGAVFFSSLGLLVPCVVET VFLWPNELGTFKWILIKNVIFSAFSIFALISGSFVSIEEIVKLYTNDGHTE
AaAAAP7 (AAEL00585 3-PA)	DFSEVKDYNPFHRKIAKPNSTIGTLIHLVKGTGTGILSMPLAFRNGGFAF GIVGTVISGIIYAHCVYLLVSTSRKACRRSFVPM LGYTETVENVFTHGPRG VKKYAILARFLQVVKILQFYLLICVYLVFIGNTLKDIVNHDFQLGWDTRVF IFLAAVPLIFTTQIRELKYLVPFSAIANALHITAIGITMFYILKEPISLENRSMW PAWNTLPAFIGTVMYALLGIEYVLPNENKMKRPEHMLGNCGVVNVAVCFI TALYTIVGALGYAQYGGDTKGSVTLNLPANEALAKSTQLLTITAILSTGLI NYVPTDIVWRKIQH KIDPKRHNFAQISFRFGMLVLLTAIAVGVPELEPFVGL TGSISGGSLVVIIPAVIDTVFRWPGGFGRMNWILWKNVLLVLFGLLVLGIGT YFSVVDIVAIYEKE
AaAAAP8 (AAEL00585 4-PA)	MAIPLAFKNGGLFFGAIGIIAVCFLYVHCVDLLVGTAKACKRYRVPTLGF AETADIVLVNGPSTVRRFASFVRNYIDGMLVFHSLIFCLFQIFIATSLRDVI NNQLQLAWSTGVYVAIVTVPIALIIQIRVLKYLVPFSAIENALMIIAFGITLS FLVNEPVS LDNRNLWPEWNLPPFFIRYWWVQLYETTTFRNSSNFSTILFAI QGIRFVLP IENKMKHPQNFLGTCGVVSQAIAFLSILYIATGFFGYACYGDDT KASITLNLPSDSRLAEFTRLLAALSALFQMGLGFYVPM EIIWRRIETKIPED HHNVAQIAIRFGLMTILTAISVGV PDLQLFVGLVGSFCSSNLVLLVPVLDV VFRWPNDYGPCGWILKNVILAVFGVLLL VFGTYSSIRRIIKTYE
AaAAAP9 (AAEL00585 5-PA)	MSSSVENLEKNDDDDYNPFHRKIKKPNTTIGSFIHMIKGS LGTGIMAMP LAFKNGGLIFGSIGTVVICVLYAHFVHLLVHTSQKASKRSQVPMLGFSATA KDVF GKGP SLRLYTSYASGFIDSMVIDGFLTACLYIVFIAKSLQDVLYNQ LQLDWDTRVYILLLL PLLVIIQVRK LKHLVPFTAIASGLIISAVGISLFFIFTA KIDLSSKSMWPEWMNLPSFVSTVLF AISGINTVLPVENNMKHPEHFLRPF VMQTAFGCLTVLYGVTGFFGYAQFGNATKASITLNLPSDNGWAQTTR LIS AMGVLVALGFSLYVPLEILWPRIESRLSPKRQNC AQIGMRSMFALAMVLT LVVPEIEPFIGLLGSFSTASLSILFPVSLDMIFRWPNGFGRCRWHLVKDVVL WVFGFLVFLIFGTYFSIMDIVEIYK
AaAAAP10 (AAEL00585 9-PA)	MLVIDSILSICLYIVFIAESMQGVIYNQQGLDWDTRMYILMIPIVIMQVR ELKQLVPFTAVANMLIIASVGVSLYFIFREPISLADRNLWPQWTTFPSFVSTV LFAIAGIKTVLP IENKMKHPGDFLRPLGVMQSGLGILTVLYGVTGFFGYAQ YGEITKGSVTLNLPSDSGWAETTRLLSAIGILVSLGFTLYIPMEIWPRL EAK IPLRWHNVGQISIRTGLAIAMVGFALVAPKVESFIGLLGSFGTAVLSVLLPV TVDTLYRWPTDFGWCRWRLVKNSVLILFGLFVLT VGTYFGILDIVAIYQ
AaAAAP11 (AAEL00586 5-PA)	MKVREDDYDPFKHRQVEKPNSTIGTLIHM IKGSLGTGIMAMPLALKNGG LIFGTIGTIVICVIYTHCVHLLVSTSQRACKKGQTPVLGYSETVHAVFSDGP SKVRRIAKFTMGFVDMILIQSILT CCLFLVFIKSLHDVIYNQLGVDWDV RIYILIELIPVVVITQIRELKYLVPFSLIANALLISAIGITLYFILSKPFSLDNRN LWPEWSSAASFASAVLFAIQGIRYVLPVENKMKHPQHFLSSLGVLNIAMAF LISLYIITGFFGYAQYGDKTEG SVTLNLPSENLWAESTRLLSGIGIMFSLGLS

	YYVPMDIMWSHIHSRLSQKWHNWGQIIVRFTMLVILAAVAIGAPEIGPFVG LVGSFGSSTLAILIPVTLDVIFRWPHGFGRMKWLLWKNLILVFGVGLFILVAG TYFSVKDVVAIQ
AaAAP12 (AAEL00719 1-PA)	MTVDKGHSNTAFVGDQVTSKKSAPVKTISANNYVLEIQDKKPGLETDY NPYEHHRHVEHPTTSNETLIHLLKGS LGTGILAMPNAFHAGWLVGAVGTL LIGILCTYCIHLLIKA EYELCRRKRVP SLNYP AVTQTALLEGPDALKPLSNVI IHIINVFLVYQLGTCCVYVVFVASNIKAIADYYTETPTDVRFLMLIILLPLI LINWVRNLKFLAPFSTLANFITLVSGIILYIFREPVTFEGKEAFGKISEFPL FFGTVLFALFAIGVILPLENEMKKPKQFGGNFGVLNKAMVLIVTLYIGMGF FGYLNYGADSKGSITLNLPEQEILAQCVKGMLAFAIYITHGLACYVAIDIT WNDYAKKRFSGDSPRSVFYEYIVRTVLVLTFLAVAI PNLELFISLFGALCLS ALGIAFPALIQTCYWHQRHGWDKTMIVKNV VIGVIAIVGLVVGTTTSL KEIVHTFFEEE
AaAAP13 (AAEL00719 3-PA)	MSSGSPKKDVNLDMQLLSKSSPTRNGDMIVDDNYDPHLHRNRPHPTTTF ETLVHLLKGS LGTGILAMPQAFYNAGYISGFVNTILIGILCTYCLHVLVQA QYILCKRHRVPILTYPISMKMALEEGPA CLRRFSPYAVVIVDGFMIYVQLGI CCVYIVFVATNIKQLVDVYLNLDVKIHC MILLVPLIGINMIRNLKILAPFSTL ANVITFVGLGMILYVLDLPSLSE REMVTDIGRFPLFFGTTLFALEAVGVI IALENNMATPKSFGGTFGVLNVGMFVIVALYAGMGFLGYWKYGA EALGS LTLNLPEDILSRTIRILFAVAIFISYGLQCYPVDIWNVYLVQKYKDSNNK FVYEMLVRIVVIVTFLAVAI PRLGLFISLFGALCLSALGIAFP AIMEICVL WPKLGPGLVVLWKDIILILFGIIGLVAGTYTSVRDIIYSFQ
AaAAP14 (AAEL00719 7-PA)	MDNFKKKTNRPNLEYTPIRPQWTGSSKSEVNNYIFGNMKDSLSDVAAQ TVAGSTLPLVGMPREDEEAGSYNPFHRKLTHPTSDVDTLVHLLKGS LGS GILAMPLAFLHAGLWFG LGATLAIGAICTYCIHILVKCSHILCRRAQIPSLGF ADVAETAFLAGPDGVKKYSRLARFIINLFLVLDLMGCCCIYIVFVATNVKQ VVDYYTHSHYDVRYYILVSLIPLILINLIRKLYLTPFSMIANILIGAVGIT LYYITDLP AFSEKGVADVHHMPMFFGT VIFALEGIGVMSLENNMKTP QNFICPGVLNIGMTVVVVLYALVGFGLGYLKYGEDTKGSVTLNLPVEDIL AQLVKIMIAVAIFLTYSLQFYVPM EIIWKNVQHNFNEHKNAAEYGIRIGLVA ITVFIAAALPNIGPFVTLIGAVCLSTLGMMPFAVIELVTFYEKPGYGRFNWIL WKNIFLILFGVVG FITGTYSIEEFSQHLEEV
AaAAP15 (AAEL00720 0-PA)	MCAHFNEENNEGSK EETLSSLPQASFN YINSIVGSGVIGIPYALHRAGFGL GLFLLVIVAVITDYSLILMVR CGHLSGRFSYPGVMEAA YGKAGYLLSLLQ FMYPFLAMISYNVVVGD TLSKVLVRLVPSWGSSMGPVRFVVLVVTVFV VIPLCLYKNV SRLAKASFLSLACVVIILFAVVYKLLAGDYAVVPDTPESWR FAHTDLIPAVGIMAFMCHHNTFLVYQSMRNATLERWEKVTHISVGF AW LVAVCFGIAGYCTFRALSQGD LLENYCWDDLMNFARVLF SISILLTFPIEC FVSREIVRTQIKRFYSQEVVEYD TDKDP SHATGAGEEDDKSVATTLVIVLA AFIISPYTECLGPVLELNGLLAAIPLAYVLPGLAYIQLSPHSLFSQEKLPAAG LVLFGTFTISGAALLV PNLIGDCRTGIIMGYCRDDELAVNGTMAGTTPST DCTGDGV
AaAAP16 (AAEL00745)	MAPNQRDLETASLLTASN DNNNDN SSSIRS NLNGDHRLKPSLLEVAIRNN MRHYGSTPNQWQKITRYDPLQHRKLENPTS NLDTLIHMLNGLNGLTGILA

8-PA)	MPDAFKNAGLYVGLFGTMAMGVICTHSMHTLVKVSHELCHRYQVPSMS FSEVGRYALESGPSSLQRFSLRIGVLINCFIIMQLGFCCVYFLFVAVNLHDF LEYISIKTDVFTVLLGILLPLIALNMIRSLKLLTPTSMVASLLAISGITISSMFL LKDLPRSTSVAPASSWSTIPLYFGTVMYAFEGIGVILPLENNMRTPKDFCR WNGVLNTGMTIVVCLYSVGFYGYLKYGDAAEGSITLNLPSHLFLAELVR LLMAVAVFASYALQFYVPISILGPVRRQFGSHRAQDYAEYALRVALVLLTF TLAAIIPNLGSFISLVGAVSTLALVFPPLLEIVTYWPSRQYGTWNWILWK DLLMVAFGLSGFLIGTSMSVVEIVTEWQ
AaAAAP17 (AAEL00891 3-PA)	MTVDKGHSTAFVGDQVTSKKSAPVKTISANNYVLEIQDKKPGLETDY NPYEHHRHVEHPTTSNETLIHLLKGLGTGILAMPNAFHAGWLVGAVGTL LIGILCTYCIHLLIKAEYELCRRKRVPSTLNYPAVTQTALLEGPDALKPLSNVI IHIINVFLVYQLGTCCVYVVFVASNIAIADYYTETPTDVRFLMILLPLI LINWVRNLKFLAPFSTLANFITLVSGIILYIFREPVTFKGKEAFGKISEFPL FFGTVLFALFAIGVILPLENEMKKPKQFGGNFGVLNKAMVLIVTLYIGMGF FGYLNYGADSKGSITLNLPEQEILAQCVKGMFAFAIYITHGLACYVAIDIT WNDYAKKRFSGDSPRSVFYEYIVRTVLVITLFLAVAIPLNELFISLFGALCLS ALGIAFPALIQCTYWHQRHGWDKTMIVKNVIGVIAIVGLVVGTTTSL KEIVHTFFEEE
AaAAAP18 (AAEL00947 9-PA)	MLPILQMTIAIAIEERQQNGTATNGSLPQGTVNNGFVLDDTAACKPSNGTE VVHHYGPHHGHDDHYYHLHHHHIREKPGHDYTDVITVHGVAHHTKNTY LETMTHLLKGNIGTGCIYAMGDAFKNGGLLATVLTVFIGFVCVHCQHVL LNCAKKVHMDQQDKGRPPDAETVGLCFQKGPFRRLAKPMKMAVNIF ICVTQLGFCCYFVFISSNFKQIFDRYDLVLDVHYHMALLLIPIILTSIITKLLK FLSYCSMLANVFMISLIGITFYALQDVPSISERRYVGENLQLPLFFGTAVF AFEGIALVPLQNMKKPHDFRKACGVLNTGMVFIVSLFTLFGFAGYLKW GEDVQGSITLNLDPGEVLAESVKIMIATGVLLGFALQFFVAIIIMWPPVQC RLNITKHKTLAEICFRILVLTFFIAECVPSLSLFLISLIGALCSTALALVFPPII EMIVAYSEPNCPSRFMIVKNVFILILALLGFFTGSYESLTKIVQELLM
AaAAAP19 (AAEL00992 3-PA)	MMFRDKTGPDLITFRGFTPPPATDDDLLEQRRACSMATESEKPPNDDE HSSSPNLSLFFASLCVIDLFGVFPIVALPKSIISCGLYGIPLVLLVITLQIYTAT VLGRCWTIAEKLDPSIVRKNRYPYAAIAEFTYGKRMSVFVTVLLDMTVFG GGIPNLLVASQNLQLLGSKLTGGEFEFSCYWLMLIGMFLCPIMWLGSPKN MRPLASISVIICSSVAFLTWLSIGEDTFVTNVNGTVVPRDDFEPFKGIELGTP SWIRLLKAYGIIAFQFDIHPMLLIQVDMKKRIGKAVFLGLMATCTLST VTTVFAAYRYGMDTNNVLQILPKSWPLYITILLVTLQLCLSSAVGNSALF QHVEDVLGASRDFTIKRCVIRSSLVWLAVLIAELLPRFDVVMGIIGGTLTG LIFILPPLFYQKMISLEAIYYQEMERIQSRDTLVSTDDREPLFSPDYGSIGPQ GTDTRRPPPPTLHWMGDCFSICHDRFQQFCRFLYSDCILSGAVILFGIGATLI STYYNIFDVKDGTQFWGSCAANITLVSDL
AmAAAP1 (XP_001123 019.2)	MNCLIGDMEQLISNDMLLCTAPSPSSIYNNRNNNRSGTNVISTIFLIVNATL GAGLLNFPQAFDKAGGLVTSISVQLVLLVFITATLILANCSITNTCSMQD MFANFYGQKSFLCAFCIMIYSFGCCLTFLIIIIGDQFDRVLLTYYGFDYCHT WYLSRTFVTIVTCSLFIPLCFKRLDILSYTSSIGCITILYVALLIVYKSFTYT ESSNPMKIWPDNKLEALQIIPICFAYQNHMTAIPMYACMKERNLRKFTLC

	AIVSMIICFIIYTVVGISGYATFGIDKVPDILQEYTDKSIILTLGIIIFIAIKNFTT YPIVLYCGRDALLSLLGMDINITIKFRVFITLIWYILSLIIAILVDPDISPVINLLG VLSAAFIFIFPGICLFQCILLKDSELHLNKDRLLIFFAVFITALGAFVSGIIFVE TIEDLSITSKTIPLVTGFRHLNKNLCT
AmAAAP2 (XP_003251 042.1)	MLKMISQMSHIMTLANSIIGVSVLAMPYCFKQCGIVLAIVVILSSILSRLA CYFLIKSAVMSRRRNPELLAFHAFGHMGKFLVELFIIGFLVGTCAIAFFVVM GDLGPQIVRKVIDKNPEDIRTSLLVATSIFIVLPLGLLRNIDSLTTLSTATIIFY LCLILKIITESVQHIFAGDWYEHVYYWKPSGILQCVPIFSMALFCQTQLFEI YETIPNVSLEKMNEVVHGALNICTIVYLCVGGFFGYAFCTEPFTGNILMSFE PSLSSEMIKMGFVFSIAFSFPLVIFPCRASLNSLLFRRVYAHEPCVNYLPETR FRCLTIIIVAVSLITGILIPNIEFVLGLVGSTIGVMICLIFPAIFFISISSKHTNERL LAQHILFIGICIMILSTYANLYALEESTNTKILTPTNKPSNQINGLPLNLNKDD I
AmAAAP3 (XP_006559 952.1)	MSEESEGSSLNRKEEEQPYNQAETGKNEAEKSSSENLEVSRAQISESEELFQ TQEEQYDLTATQIDEPQVFSQDEPYDPYAHKPAKPVSNFKSLATLIKSVIG TGLFAMPNAFASVGLVIGVAGTILIGLLITGCLHILLKIHKMCIRLRPILN YDEVVVATLTTGNKKPWLSSRIATCLVDSSIIMCYIGVGAVYVVFISGIVQE FYDFEGIDHKYIVLILFPFFFVMNMMKYLNDAIISIIGNLFLFVAAVIAVY ALKDGIGGEWVINHNGLYPKFGVTVFFSISPGIMLEVEHDMKKPWN TKFTGVLNHGMMHITLFTLVGVIGYLFKFGPDSNGNFIRNFATNDPYWNR ENREREREGKEGNVLKSFFFCSCPCKATILALVMQALSIYFTYGLQCYMPII ILLDQYIMPGDDDNQPRGKIYLFWNVMIRLIVTFITCILAAIIPKLDLFMAV VGALGTSTLSIIIPAFLYILVHHNNYGLTKWKLVFGLSLLIIVCFITSYVIVV NLTLIIIEFFKNR
AmAAAP4 (XP_006560 541.1)	MENAKEETINMQLIGSESPYKVNNEIAGSGLNASEVPISQTTNVEDYDPHK HRNRPNPTSNAETLIHLLKGSGLTGILAMPNAFRNSGLVTGVIATVIIGVLC TYCLHVLVKAQYKLCRRLRPILSYPLSMKYALEEGPGCVRWFAPYAPGL VDGFMIVYQLGICCVYIVFVASNIKQVADQYWEPLDVKIHMLILLVPLILIN YIRNLKLLAPFSTLANVITFVGLTMILVYMFKDLPSLKEREMFGTLRNFSL YFGTTLFALEAVGVIIALENNMKTQYFGGYCGVLNIGMTVIVALYIVMGF FGYIKYGSNVEGSVTFNLPSEEIMAQSIKIMFAIAIFITHALQGYVPVDIWN TYLDQKIQRKIFWEYVCRILTTLSTFTLAITVPRGLFISLFGALCLSALGI AFPAAIIEICVLWPDRDLGPCMIMLVKNLLLIVFGLLGLVIGTYVSMVDIINF K
AmAAAP5 (XP_006560 544.1)	MENAKEETINMQLIGSESPYKVNNEIAGSGLNASEVPISQTTNVEDYDPHK HRNRPNPTSNAETLIHLLKGSGLTGILAMPNAFRNSGLVTGVIATVIIGVLC TYCLHVLVKAQYKLCRRLRPILSYPLSMKYALEEGPGCVRWFAPYAPGL VDGFMIVYQLGICCVYIVFVASNIQDLPSLKEREMFGTLRNFSLYFGTTL FALEAVGVIIALENNMKTQYFGGYCGVLNIGMTVIVALYIVMGFFGYIKY GSNVEGSVTFNLPSEEIMAQSIKIMFAIAIFITHALQGYVPVDIWN TYLDQKIQRKIFWEYVCRILTTLSTFTLAITVPRGLFISLFGALCLSALGIAFPAAIIE ICVLWPDRDLGPCMIMLVKNLLLIVFGLLGLVIGTYVSMVDIINF K
AmAAAP6 (XP_006562)	IKCNEEVTRRVNDPNATTGFAGTVELCFATGPLSLRKYSVFMRKLVNIFLCI TQLGFCCVYFVFIKMNKMLVMDVYGIEMDVHQHMAVILIPIMLSTWIRNL

556.1)	KYLVVPSSMANFLVIAGYVATMYMMCNDLPSIHERRYIADWHDLPLFFGT VIYSFEGITLVLPLKNEMKKPSNFSKPFGLNVGMVIVGGMFVAMGFISYL KYGDAVAGSVTLNLESKEVVDGKIIKHSSLPQCIQIAISLSILLTYALQFYV PIAIIWPKIVNRFQPFNWPVLSETIFRSTMCLLTFILAEAIQGLFISLVGAV SSTALALIFPPIEMVVCWQNASLGICTISKDILIVLIGLLGFITGTYESITSIK AFST
AmAAAP7 (XP_006562 695.1)	MEKNEKEEQGNPMKEFNSTRKIATIEIEGYNEKDDLYNPFENRDKKNSNS DFGALAHLLKSSLGTGILAMPNAIKNGGVIFGGIGTIIIGLCAHCVHILVRS SHILCKRTKTPQMTYAETAEEAFLCGPKTVRPFANFSRMFVNAALCATYIG GACVYVVVFVSTSIKQLVDFHTGMTIPMRLYILTLPVLLLQVVRNLKFMV PFSIVANLSMMTGFAITLYYIFNDIKIPSHVKPIASIEQLPSFFATVLFVIEGIG VVMPVENSMMKNPHHFLGCPSVLNITMTIVVSLYTVLGVFGYLKYTEDIKG SITLNIPTEDILGQAVKLLIALAVLFTYGLQLFVPMDIMWRVAVKEKCSHKY QGLCHTVMRICISIFTICVALLVPELEPFISLVGSIFFSILGITIPAVVETISCWD GHLGRGKWRFWKNSTLVIFSLALIFGSWISISDIKLYK
AmAAAP8 (XP_006565 057.1)	MSHKMLSQGVSVHGGNSQRTPMRPMIAEYDPKKHGKTELSDTVLVKY KCEKNDIPITVTNGSTLPLVERPNDEEAALYNPFHRKLAHPTSDLDLTIHL LKGSLGTGILAMPMAFRNAGLLFGLFATFFIGAVCTYCVHILVKCAHNLCR RTQTPSLGFADVAEEAFLVGPEPVQKYARLAKATINSFLVIDLIGCCCVYIV FISTNVKGVVDYYTETDRDIRFYMAALLPFLIIFSLVRNLKYLAPFSMLAN VLIATGMGITFYIFSDLPSIKDVPNFSSWSQLPLFFGTAIFALEGIGVVMPL ENNMKTPTHFIGCPGLNTGMFFVLLYSTVGGFGYWRYGEDTKASITLN PEQSDILAQSAKLMIAVAIFLTYGLQFYVPMIHWKNVKQYFGSRKLLAEY VIRIVMVIFTVTVAIAIPNLGPFISLVGAVCLSTLGLMFPSVIELVTVWDQEN GLGACYWKLWKNLAIISFGVLGFLTGTYYVSIQEILDENK
AmAAAP9 (XP_006567 533.1)	MQIPLYISEKYKDYAKNDFPNVTTYDSCQHHWRPQIVRKVIDKNPEDIR TSLLVATSIFIVLPLGLLRNIDSLTTLSTATIIFYLCLILKIITESVQHIFAGDWY EHVYYWKPSGILQCVPIFSMALFCQTLFEIYETIPNVSLEKMNEVVHGAL NICTIVYLCVGGFYIAFCTEPTGNILMSFEPSSLSEMIKMGFVFSIAFSPL VIFPCRASLNSLLFRRVYAHEPCVNYLPETFRCLTHIVAVSLITGILIPNIEF VLGLVGSTIGVMICLIFPAIFFISISSKHTNERLLAQIILFIGICIMILSTYANLY ALEESTNTKILTPTNKPSNQINGLPLNLNKDDINANFPNPKILPNIKEEMN KLPDLNVIKNSLNLQVNDIRQEPPP
AmAAAP10 (XP_006572 160.1)	MNRERLPLLFKDVNSDLSLLFATLCVIDIFGIFPIIALPRSIVQCGLYGIPLVFI VLTLLQIYTAILLGKSWIATTIDPQILRKNRNPLAAVTELTGSRARNLITHL DLTVFGCTIPNLLVASQNLQIFGLKISGQQFNLSFCYWLLIIGILLCPIMWLG SPRDMKIISLFSCTMLLLIALLIWWCIITDTRELDIIPITSPSWDKFISSYGM LAFQFDIHPTLMTVQVDMRHPQDINKAVIISFLGNFTMSIVVLIAALQLCLS SVLSHSTLFQDLEDQCNIRNFGWKRCLIRSAIVFLGVAVGESVPRFDIVM VLIGGSLLTGLLVFVFPPLLYSKIIALKTRSKKIRSLIPEVYSSSERCQSSKDMP INPRIHKSIIYGVLSVPRSEYHRYSVYVYNELENELDKIVDYENDIIDSEK FLMIKRIYDNKPIFIDASQSYNIYKQIIPEESISESTTYNYKMWSNCFSYLIV FFGIIITISSTYINMKNTHIYVQFTSPCIMNVITLQNSV
AmAAAP11	MAHFRGFYIPTLGATFNVAWETLKAKWPENSPCMELIRGSGPDQKQAPGQ

<p>(XP_392615.1)</p>	<p>SGHAQFKSFDEGHDNTEMMTMNGDQAYRDQNNVAIAEDSFSYQRNGDK VRTGVSSSGEFSEYDEGGGEFGSGVKINEWQAAWNVTNAIQGMFIVSLPF AVLRGGYWAIAMIGIAHICCYTGKILVECLYELDTTGTQRVRVRDSYVAI AKECFGPTWGARAVNIAQIIHELLMTCILYVVVCGDLMIGTFPEGAI DTRSW MMLTGIFLLPLGFLKSLQHVSVLSFWCTMSHLFINAIVGYCLLEIGDWGW SKVKWTIDLENFPISLGVIVFSYTSQIFLPTLEGNLIDRSKFDWMLNWSHIA AAAFKSLFGWICFLTQNDTQQVITNNLHSAGFKGLVNFCLVIKAMLSYPL PYAAACELLERAFFRGKPKTPFPTIWTVDRELKVVWGLAWRIGVIVFTILM AIFIPHSILMGFIGSFTGTMLSFIWPCYFHLKLRNSMEWSAVAYDCVFIF LGVLFVIGVYDSGSALINAFEIGLPF</p>
<p>AmAAAP12 (XP_394217.1)</p>	<p>MGNTDSVHDVEMNSLSNADNDRPYIKRTPMRPMIAEYDPKKHGVKTELS DTVLVKYKCEKNDIPITVTNGSTLPLVERPNDEEAALYNPFEHRKLAHPTS DLDTLIHLLKGS LGTGILAMPMAFRNAGLLFGLFATFFIGAVCTYCVHILV KCAHNLCRRRTQTPSLGFADVAEAAFLVGPEPVQKYARLAKATINSFLVIDLI GCCCYYIVFISTNVKGVVDYYTETDRDIRFYMAALLPFLIIFSLVRNLKYL APFSMLANVLIATGMGITFYIFSDLPSIKDVPNFSSWSQLPLFFGTAFIALE GIGVVMPLENNMKTPTHFIGCPGV LNTGMFFVLLYSTVGVFFGYWRYGE DTKASITLNPEQSDILAQSAKLMIAVAIFLTYGLQFYVPMEIHWKNVKQYF GSRKLLAEYVIRIVMVIFTVTVAIAIPNLGPFISLVGAVCLSTLGLMFPSVIE LVTVWDQENGLGACYWKLWKNLAIISFGVLGFLTGTYYVSIQEILDENK</p>
<p>AmAAAP13 (XP_395531.2)</p>	<p>MNRERLPLLKDVNSDL SLLFATLCVIDIFGIFPIIALPRSIVQCGLYGIPLVFI VLTQLIYTAILLGKSWIATTIDPQILRKNRNPLAAVTELTGSRARNLITHIL DLTVFGCTIPNLLVASQNLQIFGLKISGQQFNLSFCYWLLIIGILLCPIMWLG SPRDMKIISLFSCTMLLLIALLIWWCIITDTRELDIIPITSPSWDKFISSYGM LAFQFDIHPTLMTVQVDMRHPQDINKAVIISFLVTGSLFLVTILAVWKYGS NITANILQLIPGNFTMSIVVLIAALQLCLSSVLSHSTLFDQLEDQCNIKRNG WKRCLIRSAIVFLGVAVGESVPRFDIVMVLIGGSLTGLLVFVFPPLLYSKIIA LKTRSKKIRSLIPEVYSSSERCQSSKDMPINPRIHKSIIYGVLSVPRSEYHR YSYVYYNELENELDKIVDYENDIIDSEKFLMIKRIYDNKPIFIDASQSYNIY KQIIPEESISESTTYNYKMWSNCF SYLIVFFGIITISSTYINMKNTIHYVQFT SPCIMNVTILQNSV</p>
<p>AmAAAP14 (XP_396451.2)</p>	<p>MDNKAPTEMDTFLPQDGSNAKDGVFKYKVQVAPQDMETGQGDGKSFDP FSERRVDNPTTDGDTLTHLLKAALGTGILSMPIAFKNAGLVVGFATVLVAF VCTHCAYILVKCAHVLYYKTRRTEMSFADVAEVAFATGPQWGRKFSKPIR YLIQISLFATYFGTCSVYTVIVAANFNQIIKHYKEEGSGEFSRLMATCLLIP MILLSWIPNLKYLAPVSMVANIFMGTGLGITFYLVWDMPPITSVPLFAPIE DFPRFFSITIFAMEAIGVVMPLENNMKTPQHFGICGV LNKGMMSGVTLIYI LLGFLGYVKYQDETLD SITLNLPTTEEIPAQVVKILIALAVYCTFGLQFYVCL DIAWNGIKDRFQKPKMLANYILRTVMVTGAVLLAVIVPTIEPFIGLIGAFCF SILGLLIPVFVETVTYWDVGFPGNWWALKNVIIIGIMALVFGSRSALIQI ANLYS</p>
<p>AmAAAP15 (XP_624412.2)</p>	<p>MYKYQNAWKPCIIHDSGSESAPLISSGSHISVEPVIFQDSETS DLEYIPTNS YFKYGSLET CNLHSNITIIPKKSVTENHTLVTS LTLNTESSLNVIQDRCYEIH NTDLEIVEDTCKDIKSKQSSLV TIFSIWNTILGSSLLTIPWGIQMAGFFPGILL</p>

	ILIMSGLCLYTAYCLLLVYNYGGEQKNIEVIQLCQIYLNKWAHEYVAKIFSIT VLLGATIAYWVLMNSFLYNSVNFYDSVVKVSQFPIIDNTSFTSEVLCPKKI TYNSTNFIMHDYTYSTLGPLWDLYKTVPIFLGLLIFPLNFNSPTFFAKFNS LGTISIIYLIVFILIKSYSWGINMNEIEWKTSWTLKFSFPALSGMLALSFFIHN IIITIMQNNYDQSKNGRDLSIAYLLVTLTYITVGIVFYVCFPLNKSCIEDNLL NNFQKWSGLTVGARIVLLFQLLTVYPLLAYMLRIQLLTSICKIFNTGCVIIN IILVSVCIFFAVFVPIYIGTIIRYTGALSGFIYIFTLPSLLYLVLKEQKKLTFSLF LHISILIFGFLNLLAQFFITEY
AmAAAP16 (XP_624573.2)	MSHDNLGFTSSTDTLDTKRWSSSRSNQNGYDPTHNKSNIYVLELEEKKS VQEEYEEDYNPYEHMVAHPTTSFETLLHLLKGS LGTGILAMPRAFYHAG YGIGTVATIIIGLFCYCMRILVSSEYELCKRKRVASLSYPATAEAALAVGPM PFRFRSRAVHTINLFLMVYQLGTCCVYTVFIATNLKMALKTYVSDIDLRL YMLAILLPLILVNWIRNLKFLAPCSTVANFITFIGFIILYYIFREPLSFENRD VIGNVENFPLYFGTVLFALEAIGVIMPLENEMKKPKVFMKTFGVNLIGMG VIVALYTGMGFFGYIRYGGAIEGSITFSLGEPLALANAVQILLAI AIFFTHP IQ CYVAIDIIWNEYIAPNLEKNSHKLLEWEYVVRTSLVLLTFLLAVAIPQLDLFIS LFGALCGLGLAFAPIIQTFTWTVCDRTERSIMVAKNMSLVLFGLGLIV GTYTSLRDIIKTFS
ApAAAP1 (ACYPI000092-PA)	MVESGNMAKEKWKSDCVNIRSNGRTEQIKRENAEHRLSILSIVYNPTAHP TSYLDTLVNMLKGNVGCILAMGDAFKNGGLFLSPVLTFFIIGICVYNQHV LVQCSKSVKQKLKLQHNQFAETVELSFETGPQRFQSYSVFRNSVNSFIVI TQLGFCCVYILFVSKSIQQLSWYNIQLDVHVSILISMVPIMISSLIRSLKFI ARLSAIANVCMLVGLVVILYYCTVDLPLSSRSAIAHWTIPLYFGTSIFSFE GISLVLPLEQEMKKPKQFSTAFGLVNVGMVIVTSLIVLTGFMGYWRFGDA VRGSLTLNLPEEFLLSKVVISSMMFGIICTYTLQFYVPVEILWPKVEQRFGP FRSPLLWDTGLRVVLVITFIAADVPHLSLFISSMMGAVASTFLALIFPPLCH MAVTSADDGGNGYGLFNWRLAMNCVTLVLGALGFVTGTYASVYEIFGA FQKVAITAAVTNTTGNNYTAPGVH
ApAAAP2 (ACYPI000153-PA)	MIYADFGQPAMEEEGQPRGFQIRGHLVHGIPRVGDSNYDPACPTCNPGSIN DTVTPTAVVVSSPPAIVTTAVAVPGPIPATNDYNYNGPLQHEIGPMAALRQN GGMLTRTDDTYSFSGFITGIAVVFVSGEMAGIGMLAAPWAVVNLGWLGF VLLITFGIATAYSACCLGTCWLILEERYAQYRIYPIPDYPTIAMHAVGRRTS YATRACISITLFGSATVYLMLIAQTAQKFLGSHPEVEFSTWLFVFSVSLSS LMFLESPKDYIYVATGAFLTMTSSYFIIMQMLLDERIQEGSATDTQKSVPA NQFFLSFGTILFAYGGAASFPVINFMFKRDEFSSHVVASFILLTILFSSVVV GGYIYGHNTINPNIIMSLSDSWVSYAAVILMAGHLVLGFVIMAKPVTEQAE SFLSSTNGFSVQRFFVRICVLLAMIFVGECPNFISSLVALIGCSTVILATFVL PSVFYLRCAQQSATWPDRSLPWKSKLYMYTIILGLSSGLGAMFTALSEL FDLRSLIPHYYYYYFYDLDYPSLS
ApAAAP3 (ACYPI000333-PA)	MGRVSKKSFKRSSRPRAKSMITDCEIQPLLNTELSRTSIADNGFIFKYDSEN SDLENNKAPTTQSKANELLYPYLRSFSLDYDILNRPKFYRKLQPYIPLGD TITNEPYTQNSIITIFAIWNTIMGTSLLAMPWSVERAGLVMGLILMFVIAAL CLYTSNRILKVQVLHGNDTGEVAQLSKKLLGPWAEVIAKLFSEIILLGANIV YWILMSNFLYYSVGYIHDLLFADENTGAFEFNTTNLICPNSADFNATSDT

	TRQLTYERIWDLNTTVPFLVIVAPLLNFRSATFFTKFNSLGTAVLYLFIF VIIKSYSWGINMSAPTEGLTDYSEFYKNTFPATSGMLTLSMFIHNIITIMR NNENQKHNGRDLSIAFTLVLLTYLLIGITFYVCFPLAKSCIEDNFLNFPRT DVFSIARVFLFFQLLTVYPLISYMLRVQVFAALELSIYPSVLHVIALNCFVIF ICILFAIFMPHIGTVIRFSGAICGFVYIYTLPTMLHLASQRRRNLLTFGSVIFH VSISLVGLANLIAQFFV
ApAAAP4 (ACYPI0005 36-PA)	MKHTVNSNGQGADGNNANDGDGNVGTQGWRRAKGGKKQLPYDPFQM RDNSNSTTATGALLHLIKSSLGTGVLAMPNAFKNGGLIFGLFGTAAIGALC AHCYLLVVCQSLSARRTRPALGFADTAYAAFKTGPHRFRAWAAFARGF VNAALFCTYYFGNCVYVILISASFQVADNHLPEEWHLSIRTWILGLALPI LPLGIIRSLRVLPFSAVATTFILVGLGCSMAWVVIGVSPFSSKEAVLAAVPL PDMASRPWVGTAHMPFFSTVVFAMEGIGTVLPIENSMRHPEHFLRARP CGVLNAAMTLVVFLYSMAGFLGYLRFGNSTEGSITLNLNDLYVFLVPA ETVKITVTLISILFSYGLQFCVPSEIVWARLRPWLRKRKWDKAYSLPATDKD TSTVAVSTIAGSIVTMTTSTMNHTTNDKQTEVEELDEQENFVEWEY YVMRALMILGTCTVYSHLFVIFITVIAAIVPNLAPIISLFGAVFFSILGLMC PAVIHLVAFWEYNNEHENSENDESDSENDLRFDGVDNYAMFDDMSIVC GDNTQRQQRRMNDESSTKNKGMSRITATKDIAIASLAIFAMVSGAYAS LVDIFQSYGFSKEHTINSTIEIITTTIGPGPESAFLLIK
ApAAAP5 (ACYPI0005 50-PA)	MTDSMTRNFNNYPSTAKPEQHVSKQQMAAADCYDNQGMRLSELDINGK PVNGNTCINMDSLNNRCVGINIKGDTATQLNEKQNFYNPYQHRDVKHPT TYFDTLIHLLKASLGTGILAMPFAFKNAGYVVGTGLGTHIIGILCTFTIHLV ASHEL CIRRKVPSLTYPGTVAAAFEEGPKFTRILAPYARMMTNMFLVLYQI GSSCVYVVFIA SNLKVVGDAYLGGNTDVRMYMVYIPLILISWVRNLKL LAPFSSIATCLTVVSFTLIFYIFREAPSFTDREPVGTVKSIPFFGTVLFAME AIGMVLPLENEMKNPKKFGSVFGLNASMLPISTLYLIVGLLGYLKYGDK TTGSITLDMPQTEVLSQVVKLLLSASIYITYALSNYVAFDIVWKGMEQKM EKNEHRICWEYALRTSIVIVTFFFAIIPNLEHLISLIGAFCLSSVGIALPAIVS FLTFSDVYKNEGNIQYGLFCLRNLLIILIAIFAFVIGVSTSVSDIIHMT
ApAAAP6 (ACYPI0006 27-PA)	MRAHVMTLANSIIGVSILAMPFCFKECGIVLSTLLLVLNSLMSRASCHFL KSAIKSRTRDFEFLAFHLFGKLGKLTVELSIIMFLMGTCIAFFVVMGDLGP QIIGNTFNIKNTAALRPSIMIGLAAFVVLPLGLLRDVNSLNTICTAAIIFYAC LVFKIFIEAFDKLFSFVWVSEIYFWKPVGLFQCLPIFSMSLFCQTQLFDIFET ITNESLTKLNAVIRSSMNMCSTSVYISVGILGYIAHYDSVLTGNILTSFSQCLS SDIIKIGFVMSIAVSFPLVIFPCRSSISLIATKDYVLVSGGRQHIAETPFKCIT FFIVLFSLVGTLLMPNIEVVLGLIGSTIGVMINVMFSPMFLVRVANKSPKER FWARFIFVGFIMVMGTSANLFAIQQTFTNTKTVHREAESLNFKPMDTHH DIINPKLKTSEEIRVEPPIPVEPIIKSNVDVKQEKSVKVENGNTISKDAINKE DEELEKRPEIELLEKLSHEKEEKILAESKKILEELK GARQVQFEKNRR PVNNVKDLNFSMNKQEVKKNDISLDEKKNQLVKDKLPLPLVKEANRPN KTKMETIRDKRDLTSTVHSNNEEKEENC DKNEKSVNEDVPRVKHVDNID NIENISISN
ApAAAP7 (ACYPI0010)	MSHHFAGAGDVGVP LKSTVGVGIPVSAEDILQTFDNDERKLQVCGSMRP IITELDNKRGSIRTDVADLMVKYKCSSNGVPITQTNGSTLPLVPGSSKD

18-PA)	AEFGGYNPFDHRTVQYPTTDMETFIHLLKGSLSGILAMPLAFMNAGLIF GLIATATIGFVCTYCVHILVKSSHKLCRMVQVPALGFADVAEVAFLAGPPAF QKFSGLFRGLVNTFLTIDLLGCCCVYIVFVAKNIKQVMDEYVLDINVRWY MLMMLPLVIAMNLRNLKYLAPLSMVANFLVGTCTITFWYVFQDLPPM KSAPFITDWHKWPLFFGTAIFALEGIGVVMPLNNMKTPQHFIGCPSVLNI GMAIVVLLYSTVGMFGFLKYGDKTEGSITLNLPKDELLAQSVKVMIAVAIF LTYSLQFYVPFEIHWKGSKHRFTSHPVLFYLLRVLLVVGTVLVAIACPNLG PVISLVGALCLSFLGLILPSCIDLVTWCWEEPGLGRGYWRLWKNMVIIMFGIL GLVTGVYSSMLDIIVTFNQ
ApAAAP8 (ACYPI0013 66-PA)	METDKLNDRENKTNGDAQFAVVEMGELNHCSRSTSGENKRSGYLVTLM HFIKGNIGCGMLAMGEAFKIGGLYLTLFILLYVWLISVYNMHVLTTLRKY QNRLQAKRAPSFGDTVENAFKMSDKWIFRSISNNIRKIVFYNILITQLGLCS VYILFIGTSLQKLLQYSYEINIQTVLLTmplimvcaslrklrFIAPLSTLA NFALITGVITIMYYSKSGPSSKGVRSYSKWTELPTMFGIIMFSFEGIGLVL LFAEIEDSKKFTSSFGVLNFGMVAVMMLNVPLGMTGYSKWGDDVKSSLT LNLPHYDHELTQFVILMMLGIACSYALQFYPAAVIVYSLEKIYGFNHPAV WDYSIRICICLVTYLAASTVPHLDLDFMSLVGVTCTVALTMIFPALSNLAFRT KDKGSFFGSFFDMVTILTAVIGSVTGIYANTTAIYEAFSQNHSNG
ApAAAP9 (ACYPI0016 84-PA)	MMGSQGVPELQSFLLDDKSKMKEVPPQTKRKSSKNQEKSEVANLNGIE YFDPFLERNLEHPTTNGETLTHLLKASLGTGILAMPQAFQCSGLITGIFATV FVSFVCTFCSYSLVKCAHTLYRRTRVTAMGYADVAEVAFANGPAWSRKFS SLTRQLVLWLLFVTYFGTCSVYTVIIASNFELFAHHMGYALNLRIFIAMLL LLPLILLSYVPNLKYLAPVSMVANLLMSVGLGVTFYTYLNDIPSISDRPAV GSLETFTFFCLTVFAMEAIGVVMPLNNMKTPRKFLGVFGVLNVGMGG VTVVYILLGFLGFLKYGDETKSSITLNLPTEDAAAQVAKICISLAVFCTYGL QFFVCLEIAWTKIQENFEKATIYHNYVLRTVLVTLVAVAVPTIGPFIGLIG AFCFSLGIIAPMIIEFATYWDQVTVWMTIRNAVLISVGILALVFGTSNSVA DIITAYVPPELIPINATGTRTAAQ
ApAAAP10 (ACYPI0027 42-PA)	MANFGRFYVPPFGAAMNVVWAAVKAYVPEDSPCVEAIMKRRGDRAAAG AASAGTGTGAADGVDAERNRLQGGGKPDTPNFRTTCNSELSSYGGVEKR DGGVDGDGVTKRTPQAFSMDDGSFDEDSSGGGEFGRGRHKIDEWQAAW NVTNAIQGMFVSLPFAVLRGGYWAIVAMIGIAYICCYTGKILVECLYELD LNTGQRRVRVDSYVSIARDCFGPVWGARAVNVAQMIELLMTCILYVAC GDLMEGTFPDGVIDTRSWMMITGVLLIPLGFLKHLHHVSLLSFWCTMSHI VINIILGYCVLELPDWGWSKVKWTIDVENFPISLGMIVFSYTSQIFLPTLEG NLSDRSKFDWMLWESHIAAAIFKSLFGYVCFLTFQNDTQQVITNNLHSPA FKGLNVFLVVKVLLSYPLPYAACDILEKSFFIGPPATLYPSIWHVDGELK VWGLAFRVAIILCTVFMAISIPHFAILMGFIGSFTGTMLSFIWPCYFHLKLG GDSLEWRTIMFNCVFIFLGLFGVIGVYDSGTAIKAFQIGLPF
ApAAAP11 (ACYPI0041 84-PA)	MCSTNSSQEYLVAPSKDGMDETSYILQRRRQQQVMDGGDNLKNCPKFA SFNYINSIIGSGVIGIPYAFNLVSGVGMGVILLALVAIVTDYSLVLMLSAHIS GSFSYQSLMKSAFGRYGFVLSFLQFIYPIAMISYNIIVGDTATKVLIRLFS LPNDSVFAQRYFVIAMATIFITPLCMLRNVARLAKASIVSFIMVLVIFVTV IRYESLHDVMSTVTEVGNINTWDFARPGAIQAIGIMSFGFMCHHNVFLLY

	DSIEGASQTIWNCVTHVAVTISFLLMVAFGLVGYATFGDLTQGDLLENYCW NDDLINISRLLFSLTLLTFPLECMVTKAVVDQTLRGGTDPVPMSSKKRHAI TVSILMATYFVSISTKCLGIALEINGVVAAIPLAFVLPAAIYIKISNDSWKEKI PAYCLALFGTIVAASGISLVVYEILTFTADSCENDRIMDHCNINDTYLPTGDI IQLPLN
ApAAAP12 (ACYPI0043 20-PA)	MVEVQSQTGSPKPMVIRRCTEVPAMAGSPTASEMTRRRRRRRLMSNAS SVVSAAAAGIPASEKHKISNNEALMHLVKATIGGGFLAMPEAFHNIGIVM GVIGTSILGLSVLNMMS CIVRCSQTMRS GKYVDIILAEQNGKKT VGN GDD DGNNGSKQLARQRHSNELVLP SMDYPDTVANVLKYRAHGRFARFAS FAR NFTSASLVATYYGVNIYVCIVSSTSKQLIDQYTSEASEDSWSHSLHG SIRW YPIIISVLILPVG MIRLMKYMVPFSVAANACMLSGTVAVFYFIVFGDGSQDP IPPEEQAKLVVWPATRWTLFAGSS LCSLESVGM LLIENAMSRPLELAGPP YTLHRSVVVIIIIMNSVLGLFGYLR YGDQCAGSISLNL PQDNHLSQVIKMMI AAGILLTYGLQLTVTTDLAWQGLRSKVVKSMGGSDSDDAEDDDFRQK
ApAAAP13 (ACYPI0055 19-PA)	MTTEINGDFSINDNHIKVQAAKPAQVNC DKMTLKT SRVNEDKPLLTGTAT LYNQNGSNFLSPTARTLPDTNISSGPMNESLEKNVANGGSTSDYNPLLNRQ LENPTS NFDTMIHLLKGNIGTGILAMPDAFRNSGWV VGLVCTALLGAVCT HCMHILVRCSHEL CVRTQRPSLSFPNVAEMAF EYGPPKLQKYSSAASKFIN TFLVMTQLGFCCVYFLFVATNLQEVITHYFSVKLSVQSYLLILLVPMILLNC VKSLKYLTPASFVATILTVIGLGITFFYLLQGLPKT LSVKAFSSWQQLPLYFG TAVYAFEGIGMVLPLENNMKNPESFGGMTGVLNTGMVIVTCLYTSIGFFG YLR YGEAVKLG SITLNL LKISQSVRAAMAFSIFLSYGLQFYVPIGIVWPAL KGYFHSQSSQRNAELSIRVFLVTLTFALAAAI PNL SAIISLVGSFSSSALALIF PPIIELMTFWDHCSGKEFTLMFVKDIIIIIGFLGFGFGSYASLWNIIEPISS
ApAAAP14 (ACYPI0062 58-PA)	MDNPAAVLSDDVEDWTPRAPSTGSNQ P QARLSSNTPNNSSQTQSPTPHQ KQQFQQPTPQQQYKRNASTYSIDIPATLGLMVTNTNPAANGGSTTSSTMK LTEYSSSGSNSSNSG SVGDGTATATS YIISGGNGEKADGNMVGGRRRKG GKKQPRYDPFQMRDKSKATTD SGALLHLIKSSLGSGILAMPNAFKNGGLI FGLVGTAAIGTLCTHC IYLLV LCSQTLARRTRR PALGFADTAAAFSTGPR RFRAWAPFAREFVNAALFCTYYFGNTVYVVLVAASFQVADTHTPPEWH MPIRAWILGLAIPLVPLGIVRSLRLLVPFSAIATAFILVGLGCTMSWVVTGVS LFADESALTA AVPLPDIGSRPWIAPVGHMPLFFATVLFAMEGIGTVLPIENS MRHPQRFLKARPCGV LNAAMVLVCLYSVAGFLGYLRFGDATDGSITLN LPNDLFAESVKIMVALSILFSYGLQFCVPSEIVWTRLEPWLRKRRQNSKYS ADTKTATSCGAPVNTIAGSTISTVTA VTTTSATS VDEKKQLELESNLQDKP MEGAYYVMRAAMILGTVFIAALV PDLAPFISLIGAVFFSILGLMCPAVIH LA AFWNHGDEDEGEETDDATDSEDDLDFDGDY YAVDDDDTDLEAVQRQPQR RSSGRSTRRRRKGMSRWTVAKDVAIVMIALIALVSGTYASLV DIVAFY GAG GEGGHHA AKNGTAVTVGTTTIGPGPES AFLVAANVVPQL
ApAAAP15 (ACYPI0076 81-PA)	MGSQGTEPVLQS FLLVEKSKMKEIPRNLRKPSNILEKGEVAHLNGIDYFDP FLERSLEHPTTNGETLTHLLKACLGTGILAMPLAFQCSGLITGIFGTVFVSL VCTYCSYLLVKCAHTLYRR TKVSYMSYADVTEVAFANGPQWSRKFS SLTR QSVLWLLFVTYFGTCSVYTVIIASNFEQLFTHHMGYELNLR YFISILLIPLIL LSYVPNLKYLAPVSMVANLLMAAGLGITFY YTLCDVPNISKRPAVGTLET

	FPTYFCLTVFAMEAIGVVMPLENNMTKTPRDFLGLFGVLNIGMGGVTIVYI MLGFFGYLKYGETTKSSITLNLPTEDIAAQVAKICISLAVFCTYGLQFFVCL EITWTKVQKNFEKATVYHNYILRTVLSLSVAIAVAVPTIGPFIGLIGAFCS LLGIIMPVLIFFTYYWDNITVWMIVRNAVLIAVGLMALIFGTINSITDIITVY EPNATQTVNSTMNSTLIHSTTQ
ApAAAP16 (ACYPI0088 49-PA)	MGDKSRKNSATQDVEANGTTDQQQQVEAVAKAVHGHVPVSEHPTTYCETL MHLKGNIGCGMLAMGDAFRNGGLLMAPILTVFIGTVCIYNNHILLNVAH KLLKSRKLEHCPTFSETVELSFATGPKSLQKHADLFRRTTVNVFVIITQLGFC CVYILFVSSSIKQFCDEYGTVLDIHHMIFALVPIMSCAMIRNLKFIAPLSTA ANISMAIGLGIILSYCVVDLPTLNSRTAVAHWSQIPLFFGTAIYAFEGISLVLP LQLEMKTPNRFASMTGVLNVGMTIVTFIILTMGFVGFWRFGDDVKGSLTL NLPPTLILSKIVVGLMVFAICTYTLQFYVPVAILWPSVQEKYGPFPSPALA EYLLRAVLVAFATFLAAEVIPHLALFISLVGAIASSTFLALIFPPICHMVWVKDE GFGAFNWKLHMDIITIVLGLLGFVTGTYFSLHDIIIVAFSKDFGFH
ApAAAP17 (ACYPI0089 57-PA)	MSKKKEISDNKLRPFKCQEKSEVAHLNGIDYFDPFLERNLEHPTTNGETLT HLLKASLGTGILAMPLAFQCSGLITGIFATLCVSFVCTYCSYLLVKCAHTLY RRTKVSSMSYADVAEVAFANGPQWSRKFSLITRQSVLWLLFVTYFGTCSV YTVIIASNFEQLFTHHMGYELNLRYSIFISILLIPLILLSYVPNLKYLAPVSMVA NLLMATGLGITFYTLCDVNPISERPAVGTLETFTYFCLTVFAMEAIGVV MPLENNMTKTPRSFLGVFGVLNIGMGCVTIVYILLGFFGYLKYGEATKSSIT LNLPTEDLAAQVAKICISLAVFCTYGLQFFVCLEIMWNKIEETFERTTILHN YVLRVTVLVIASVLIAVAVPTIGPFIGLIGAFCSLLGIIVPLIIEFATYWDEVTV WMTIRNLVLIVVGVLAIVFGTANSIADIIAAYDPAQAVECVINSTLPQPIAE
ApAAAP18 (ACYPI0089 71-PA)	MSELSLGTGIGPPSDTKDQKSKSYAVNVQQENMSLNLNANGSPPYDPHAHRIL EHPTTNETLIHLLKGLGTGILAMPNAFYNSGLLVGTGTVGTLIGFLCTYCL HVLVRSQYLLCKKHRVPILSYPDMSKYALQDGAFLKFGVPLSAIIVDGLFI VYQLGICCVYIMFIGTSIKQVLDIYIEPMNERYYMLMMLIPLVAINLIRNLK LLAPFSQGANIITFAGLAIVLWYIFVDLPPISSRPLIGEPRNYTLFVGTTLFAL EAVGVVLALENNMKTASFGGTTGVLNIGMTIITVMYVGMGFFGYVKYG EIVEGSVTLNLPNGDILSQAVKLIFAVAIFITYALQAYVPVEIHWNTYMKKR QNWDKTTMEYLLRISVVLVTFLLAVAIPLLDLDFISLFGALCLSVLGIGFPALI EICVLWPERNFGRFNYVLIKDIILIIIGILALVLGTYISLQDIARKL
ApAAAP19 (ACYPI0097 36-PA)	MIADSSGLTVPFAILCIVDLFGIFPIVVLPGPIKCGWLGIPLAIGVFAIQVYT AILLGKCVIIAEEIEPNIVKKNRYPYAALAEFIGNKVKRIVTVMLDVAVFG ACIPNLLIASYNLHILGIKLSSEFRDVSPIWLVIGIILCPPLWLGSPKDMK WIVSSSVFFVGSVSVLTWIAMYDTQREIYAPIPEPSWNSVALAYGLLAFQF DVHPLVTVQMDMVDKRLPVAIICAFITCSLFLITTVIGYVRFGSLLSSN LLDQLSNSYILDVNITLVTIQICLSTAVSTTALFQHIEHFLKIPKEFNRRRCVL RSCIVMLAVTIGEAVPRFDLLMGLVGALLTGPLMFLPLFYIKIRSLRRLKI KKSEGVCYRTFPNAKLTPIVGFKRLALLIFIILAGTLATVLSVSGIRDTHIYA KFTPSCIMKLFE
ApAAAP20 (ACYPI0805 26-PA)	MIAYYYGMRFIMILGSIMVAVAVPDIGPLVSLVGSVGFSLGLIVPVIMETV WYWSEEDDDWNGAVTASATTVTTSETTVTDAGTTSTTVNDGSALTA VAAGEGERRLMIRGGGFRAIRHLKNLILLLLGLMALVGGAFYNIRDIVSR

	ASGDGSPAPTI
ApAAAP21 (ACYPI2621 2-PA)	MSDGDVGITNSCDDTSTESNMVSKPQSSSTLSSGLLSCTSQTSSSLMMQNF LNYDPPSLTSDDTYYSSFTYFVRSRISGLGFLCLPHAFKQVGVITGLALCFIA GLMFTYTFTTLSADCAVSELDRVQLGMWPESNLQMVFNFFKLLTEMGFS VNFNVSLSFEIVCLIFLLLPNGNYLTPLNLLSNITCTALLSIIFYNIFTSDMNI DRETLMCGNWDVDFQFFGILLFTFIPIVQVFKIEDGSIRKNDIAWPLKLLN TSMIILTNMYIAIGLCGYLDQQDVPIFGVLILKFMPAIRCRTIVKTCVALNVT IFHRELVESTVLWVPSIMVNNVKNDKMGQPPSAVKYSPVMIAGMTAFT KILFTFCFFVTTVVASPVTSDFQVIVALIGYLGACNMMIYPFIVEMCVTY ALYGMSTGRYVIFKDVCLVLLGLSLFACGTSMLVVCIIHGHGD
ApAAAP22 (ACYPI4429 7-PA)	MVSRSKTSPLSCTLKSSSPMMQNFLNYDPPSQISDDTYSSFTYFVRSV GLGFLCLPYAFKQVGVITALALCFIGGLMFTHSFTTLCRFRYKLCMHRVP TVPYQNLIEYSLACGPICRWSTFLRFTFIATNLTNFGKSCLYMKFVSLTIY EFLTEMGFSVNYFNVTLSFNVCLLFLLLPNGNYLTPLNFLINIACTGLLSL LFYNIFTSDMNIGCQTLICGNVTDVQYFGILLFTFIPIVQVFKIGDRSIRKN DFAWPKLLNMSMVIITNMYIAIGLCGYLDQQNVPIFGIPILKFMPAIRCRNI VKTCVAINVTIFYRELNESTLLWVSSIKVDKSDNKMGNPPSTVKYSPAM FAGLTAFTKILFTFCFFVTIIVASPATSGFQAMVALIGYLGACNMMIYPYI VEMCVTYALHGISTRRYVIFKDVCLVLLGLLVFCGTSALVLRIIIHGD
ApAAAP23 (ACYPI5319 8-PA)	MDRPAEKKDKISNASALMHMIKSTIGGGFLAMPEAFHNAGLLVGSIGTM ILGVAVLNMMSFIVRISQKLRSGKYAAAILAEKNKNNDGTERKHDGEPIDI NSSELVLEPMDYPDTVEAVFKYGGGRFASWAPFAKKLTTVSLIVTYYG NIIYVCIVASTTKQLVDIHTKDESEMGLWYALHGLNVRWYPLFVALLIIPM GMIQLIRYLVPSVIANGLISAGTVVLFYFIFTDDNGRNPLNAEERAKLVV WPMTRWTLFAGSALCSMEGVGMLMHIENSMKKPRELAGPPGYTLHWSM LIIVILNGALGFFGYIRYGERCLGSVPLNLPDNLSEGVKIAVTLGILMTY GLQLTVTADLVWQWLKRRSDTNVFPRTGSATQEVSEMNNQYKLMRFLII GTVIVATIVPDVGPMSLVGSGVSVLGLLVPAALETVWYWDVRSEEDYSE LDVDLEFDGIGLASAAALTSRDDNLKMRKIGARRTLRHIKNFIYVILALSA LAGGAFYNLREMFALVPDHT
BmAAAP1 (NP_001243 940.1)	MSKNGLEEPSGSQPTPKETTPLITKGGENGNGGKNGGLSVGQTSMLIAG EMAGSGVLALPRALVRTGWIGVPIIILMCLVAAFSGKRLGDCW TILEERNP QLRSRKRNPYAIADQTLGKTWSVVVSMIIVTLFGASVVYLLMAAQIIEQ LLTLIPTLTICTWYLIVVGAMTPLIFFNSPKDLTFTGVIAFGSTVIACILYFIE MMNEVRPFVFRWGVHGFDFFLAFGTIMFAFGGASTFPTIQNDMTDKSQF GKSIQYSFGAILLLYLPIAIGGYAVYGESVGSNVALSLSATPLTLVGNIFMAI HLVFAFIILINPVCQEMEEIYNIERDSVGWRVLIRLSIMGAILFIGESIPRFYTI LALVGGTTVALLTYILPSFCYLSLINQTPREGQTPPETPGWVKLLCYEVIAL GVLGAVAATYSGLSAVFSSAVTTPCYLR
BmAAAP2 (XP_004924 910.1)	MSWRPDNTKNDMSKRISSSSIYSNRGSLSTNLNQYLDFERDSSVATYELYP GTETDNYDFTVERHSPLLYNLFESTAYLIKGGAGILNVHVAYMFAGLWT SLVVTVMGGIICRCMMLLVKSAHKMYVLLRVPRLYADLVEAVVAIGPL KKLRNYSKTLRYFVDICLFVQMCCTCCIYEIIIATLKKVLEAVSPSLSHQE LHLRIYVMITMVPLIAVCLIRNMRYLAPFSLADLFIGICMAIALYYGMSST

	VPIRERPAWKNYGGLIRGSSIIYALSGITATLPVENNMERPKLFFIVLQYG MSVVLCLVTVTGFFGYWGFGENCQGPITVHMGVSEVFPILILQFKLILMLC VTFGVKFWVPFRLVWYYLGKLNDRDKLWERIYMMFLIILITGITTLVPNL TSVMVFMGSFLPPLTAIIFPALIDSFAFWNEYQKERFRWKLTLINIMSVMIAF TIVGSAFCLMFIKV
BmAAAP3 (XP_004924 926.1)	MFIYKFMGGIVETITGGDEEASYDPHLHRKIEKPTSYSSETMIHLLKGSIGA GILAMPEAVRRVGIFASIAGLLLVGFASYCLQLLIVAQYELCKRWRRGYM AYPKSMRLALQDGPCLRWSSGLLYYFVDVVLILWQLGICVIYPVFAENI KQVCDSYNLELGLRTHLCCILGPLIIVSMVKDLKVMTPFSSVSNVITILGLI LVFFYMIEEDLSFEKEKMEVKSADIPVFGVTLFALEAVGVVLALEYNM ENPKHFCGIFGLFNIGMMIIIALYLMVGVFGYVKYGDEIKASITLNLQNE KKAQAAKLIFALSIFLSPQLQNFVAYNIIWRRLLKKKITGKKKCPIDYALRILL VLVPWALAIAVPQLGPFISLFGALCLSLAVVFPGLIDVCIWYPDRYGLCY KLLRDVFIHAGLVCLVSGSYSSMIEIVNMK
BmAAAP4 (XP_004924 927.1)	MDENKAETMYLRAVPDDVNGEAKDSAAEENYDPHEHRQLPKPTNNIETL IHLKCSLGTGILAMPQAFARAGLVTGIVFTVLIGVLVTHCLHVLVRSQYA ACKHLRVPLLSYPASMAAALEVGPAPFRRLARPASITVDIFLVVYQLGICC VYIVFIADNIKKIVDPFYAMAVELHMLIILCPLIVFNLIPSLKLLAPFSAVAN VLTFIGLGIVVYYLATGKKSHQPLDLWGSLETFFLFFGTVLEALTAVGVVIA LENNMKTPKAFGSPCGVLNSGMALIVLLYVTVGAMGYIYCVSKCSDSITL DLPSGPLATSVIVMFAVAIFISYGLHCFVPVDVWVRGYVEPRLRAAATPPA RLVLAEYVLRVLLCLLTFVLAVSVPRLLGLFISLFGALCLSALGICFPAIMEA CVKFPHDLKPIWLLKDVLLFLVGLVAGTYTALQAIKRSFQSTSPLHA
BmAAAP5 (XP_004927 269.1)	MNGNCNPETPLEESQTKPLVSSHDRTYVGETTGGLSVLFTILCIVDLFGV FPVIALPKSVISCGIYGIPLVLSVGLQLYTAALLGRCWLLAKEITPIISEKN RSPYAAVAQLAFGDPARRLVIFLIDATVFGSGVPNFILAAQSLQIFWWKISG GNVGVTYCIWMLVLALLCPIMWLGSPKDMKPLALTSVFIVTTVAVSTWT CIIQDDVSPVSTGTILEYQPHAPDFLIAYGILAFQFDIHPMLLTIQVDMRDSK KVNKAVLGGFAITGFMFTTTAFLVATRYGQDVTNNILQTIPPSIPLYLVALLV TLQLCLSSAVSNSALFQHIEDLLQIPRNFCIQRCLIRSSVAVAVFLAETVPR FDLVMGLVGSTLTGPLMFIFPPLFFLKLCYLKSKKDITESQNAYSNNATNG SLDSQKSKLNKIETSGSSQQNGVVTVIQNGENVNPSLYTKYKTFSRDYAE MGKEDEYTIKWDIVLALVMTLGIATVIATYCSWAHSIEYAEFSPCLL NATIAARSFLESQMAL
BmAAAP6 (XP_004927 808.1)	MGDVKKQPHIDYDPFEHREVEKPNSDVRSTANLIKASLGTGILAGPLAFS NAGWGVGLIGTLFIGFLCTHCHILVKTSRGCKIEKKPLLDYAETCRSVFA NGPKSVRRFAGAASIFAEFALLSTYVGVCCIYTVLISDSIKQLVDHYVPSVT IPVEYYCLILLPLCVLCQIRYLKFLAVFSMIANVLLVATYAICLYYIFGGGIS FVDKKVAGDPARYPAFISTVIFAMEGIGVMPVENSMMKPKQNFLGFPSVLV VAMSTIVFLYSTLGLFGYFRYGDVLRGTITLNLPTTEWPAIFAKIFIALSIFFT YPLQFYVVIDIFTKYTKHHIKENYQKMAQVAVARTVGVTCVIGIALPPLLE QIINIVGAIFYSILGLVIPAIVETVFRWNDLGKFKWILWKNVLILLFGLGSLV SGCTVTIMDIIQVLKQKTE
BmAAAP7	MYPKLEKMSGKTVKEDEYNPYEHRKIEKPNSDIRSLANLIKSSLGSGLLA

(XP_004927 809.1)	MPLAFSNSGWAVGIIGTIVIAFVCGHCVHIFVKTSRGCCCKLVRRPLLSYSET CKAAFEHGPKSLRPFADFAAQLFSEFALFFTYIGVCCIFTVLIADSLKQLFDE YVTTTVLPVEYYCLILVPLCLMVQIRHLKWLAPFSFIANILLIATFVICMY YIFGDEINFDTKRISGDL SRLPAFLSTVIFAMEGIGVMPVENTMKKPQHFL GCPSVLVAMSTIMLMYSILGLFGYFRYGDVLRGSITLNLPIDDWPAVCAK TFIALSIFFTYPLHFFVVDIFTRYAEPHIKKEYRNFAQILARTSCVWICGGI GIALPMLEQIINIVGALFY SILGLIIPGVIE TVFRWEDLGRWNWIFWKNLLIV LFGVCSLVSGCTVSVMDIISILNKKTI
BmAAAP8 (XP_004927 982.1)	MISENFSVSGSNEDMPSKTQSTITLDRKDAVVENDYNPF EHRTLEHKTSTI GAFFHLLKSSLGSGILAMPMAFKNIGLIPGSIGTVVAVIATHCVHILVSTSR DVCKATKTPSLSYTDT CETVFKIGPRKLRPYSLHVRYFVDAAMAGVCLGG TSVYVIFIASLKDIFDHLTPQHILSVEVYCCILLPLIITQIRYLKFLVPFSLF SNLCLIVTFGITCYTTFHDIPSEAKLVVDISRWPLFLSTAIFAMEGINVVM PVENEMAKPEKFLGCPGVNFTMIFVAVLYGVVGIFGYLKYGNEVMGSV TINLPQDEILALIAKFLVAIAVFFTYCLQMYAPMDIHWTRLKPHIGSGYHNS AQILLRRLSVLTVVLAIAIPDLGLLIGLVGAIFFSTL GILIPVIVQTVHKWN KTSLSYLLWKNGLLIIYFIVLISGCYSAVRDILIKYSSM
BmAAAP9 (XP_004927 983.1)	MLLSFALIFYVPVDIAWRRIQDRIPAKTHR WAMSGLRLFGTLFIVGLACAV PKLELFMELVGAVCLSVLGLLLPSVIEIWRWGRDIGPTHWVWKNLVICL FAIAMVSGVTFAIKSMLNENL
BmAAAP10 (XP_004929 516.1)	MSDEKQPLLTGPNPENVIEIQSTEPVINDDGPST ETKKGDYCPASERCLEY PTSNFDTMIHLLKGNIGTGILAMPDAFKNAGLIFGVFCTLIMGAMCTHCM HILVQCSHEL CIRSEKPALESFSEVIEDSFLSGPIVFRPYAKKMRALVNIFLVIT QLGFCCVYFLFVATNLQDTMHLFRINLSVHLYLTL LPLIVALAMVKNLKY LTPVSLVASIMTAWGLAITFYIYLQDLPHSKEVNPIATWHQLPLYFGTAIYAF EGIGVVLPLENNMKTPEDFGGWNGVLNTGMVIVAALYTAVGFFGYLKYG DSVQGSITLNLNPTLLAQSVRFVMAAAIFLSYGLQFYVPMNIVWPYVKS LSENALKHGEAMTRIALISITFLAAAMIPNLSGIISLVGAFSSSALALIFPPL IEIMTFWPDQLGKNDWKFWKDIVIIVFGVTGFLFGTYTSIENILIKS
BmAAAP11 (XP_004929 913.1)	MVNEPNGAIPAPQELETISPDEKNKEKIVSKY NMTKDAESGDFDPFTERK LDTPTSNDLTLHLLKASLGTGILAMPKAFKAAGLINGILFTVIVAVVCTH CSYILVKCAHVLYKTKKTKQMSFAEVGEAALDNGPQPLRKWANAFRIFIV ISLFITYFGTCSVYTVIARNILQIIQFYCGDIINERFLIILLVPLILMAWIRNL KYLAPVSMIANL FMAVGLGITLYLVGTGQLQYDKIKDMLFKHPSEWPEF FSLTIFAMEAIGVVMPLNSMKTPRAMLGICGVLNKGMSGVTLVYILLGF LGYLRFGEVQDSITLSLGDIPAQIVKLSIAIAVYCTFGLQFFVCIDIMWN GIKDKFTKRPELADYIMRTIMVTVCVSIAAAVPQISPLMGVIGAFCSILGLI APAMIEVITYWEPGVGPGKYLIWKNILVIFGTFSLVFGTKDAILAILKDF
BmAAAP12 (XP_012550 548.1)	MFNLGRFKIPPIKNALDVALQTVRQQMPDKPGPPRPQQNVRFANLDNM GESCELSTMNETTSPSYQSTNPNPFLSGELQAEDSFTSYQNTYPQQDZIA PRTQSMQSVDFYASSEEGGFECCGKPGAKINEFQAAWNVTNAIQGMFV VSLPFAVLQGGYWAIAMIGIAHICCYTGRILVECLYEDDPVSGQRVRVRD SYVGIAKECFGRKYGARIVNLAQIHELLMTCILYVVVCGDLMIGTFPDGSID TRSWMMLTGIFLLPLGFLKSLKSVSMLSFWCTMSHLIINAVLGYCILYIGD

	WGWSKVKWNLDNFENFPISLGVVFSYTSQIFLPTLEGNMEDRSRFEWMLK WSHIAAAAFKSVFGYVCFLTFQNDTQQVITNNLRSSGFKGLVNFLLVIKAV LSYPLPYAAACDLLERALFRGKPKTLFPVIYALDGELKVGWGLAWRLGVIM FTILMAIFIPHFTILMGFIGSFTGTMLSFIWPAYFHLKLGKGNQLESKTIADY FIIGLGFLFGIIGMYDAGSALVRAFKIGLPF
BmAAAP13 (XP_004923 783.2)	MANTNAPSDSTSKYQLKATGEAAKNYDFTKARPPAKTTNVIESIGHLIKSC LGGGIVAIHESYKQCGLWTAFLVNFLLGFCVAYCMYMLARSAQRIYGKIQ VPALSYPDLAEASLAVGPWDNMRKYSKCFRYLVDLTITMDLFGACCVYQ VVIARTIKQLVEGTDLTDSAVGSSPAIRIYIIALLLPCILLCMITSLKYLAPFS IVADFFILIVTVATVYYGKTHATVSPLEMPVFKTVPGLEFIFIGVCVFSMEGV GATMAIENTMTEPKKVAVLLGGMGVVMVLMVAVGFFGYWGYGELSKS PVTLNFPWEPFPIALKVFMGLMIYVTFALNFWVPFDLVWYYLKKRHQPQ KYWLWERYRIIFVTGITLIAVTFPNISKLTALIGSFCLSSMGFMYPAFIELTL DWTDPGLGFLMWRMVKCIIVALFGAVICVVGTYTNARALVHEVFK
BmAAAP14 (XP_004923 997.2)	MRFLKSSPRKSEDDLSTQSSLRSMDSCELFGSACSDYSDCEYCDERRRQIK KKYSPSDSYCSAMSRLTPLLGLVLA TRPAYKSLGDSTDTLGPGEVSSDAV LSTYKKNFEKTVKNENKKQSSLV TIFSIWNTIMGSSLLTMAWGVERAGLP AALVLVAVMAALCLYTAYILISVNAYHGSDTCSVQALCRLLLGGWAEALA HVFSVLVLLGANIVYWILITNFFYFTVNYFIDLSVSNATEYNTLLCPNQIV NESLMIPSPAESRYWGLHTTAPLYTALIVFPLLNFNRVVSFFTGFNSLGTLS VFYLLIFVTVKGYAWGINMGALWSETHAARNAAVLSGMLALSFYIHNIIIIE IMSNNARQDKNGRDLTIAFVLVTITYTMVGAVFYVCFPLAKSCIEDVVTV YPLVAYMLRTEAAILLSLRDTPALMLLVNVCIVVMYTGALSGLVHVFPALPA ALHVRSLHLRGELAHWMTLLYCLLVLAGAANLLMQFFITE
BmAAAP15 (XP_012544 828.1)	MTVKEKIAISHISGS AVSLSQNGSTVTEPYGMFQSREQILPHTKGQLDMES GKTRDGHKVRHPTS YWD TLLHIFKGNISSGLLAMGDAFKNGGIVFAPIMT AILGVICVHAQHLLLN GSEEMHRQTKQDRPPGFAETVYLAFKAGPLRLRP LATTMKIVVNFFLCITQLGFCCVYIVFIANNIKLICDHYEVIDLSIHMIIVVI PVLLACMVRNLKYLT PFTIANIMMAVGVS VVIYQATLDLPSVHTRNYIAS WQQLPLYFGTAVYAFEGIGLVLP LKNEMKNPEEFQKPFGLVNLIGMIIVGSIF ITVGFLGYLKWGEVAGSLTLNLEPGHVLSNVVQVLIGCAVLFTYPLQFY VPVGITWPALKKRCGEKCLIAKELGYRALLVLLTFILAESIPELGLFISLVGA VSSTALALVFPPLVELVVASQKKEGLSVFIIVKDTIILFGLFVFTGTFFQSA SIVRAFRI
BmAAAP16 (XP_012544 833.1)	MPKNILAEMGSQVWLTPARQNKKEAEEWVKRNQTGPMINPSFEPDDFVP HSLSPVKDEKKKPGDKSIFLVNMKEKDLQEVEEYEPYDNRVVDHPTTNT TLLHLLKGS LGT GILAMPRAF SHAGYVVGIGTVIIGVLCTYCIHILLDSCY ALCKRRKVPSLTYTAAAEAALSEGPDWCKACAPYAALIVNVFLLIYQIGT CCVYVVFVSENIHFVLVKRFNVEITVFQVMLCILLPLILINWVRDLKYLAP FSAVANVTIVGFGHILYYIFRETPTLEGKEPVGRLADFPFFGTVLFALAI GVILPLENEMKTPKSFVKGKFGVLN RAMISIIILYVGMGLFGYLRGEE SMG SITLNL PSETETLASV VQCLLAFAIFITHGLACYVAIDILWNEYIGVRLLSK FRVWWEYIVRTIIVLITFGLAAAVPELDFISLFGALCLSALGLAFPAFIQSCT YWYYVSRSERIRMIKNIIVVLFGLVGLIVGTWTSLSQSIQKFSGPHNPIVNG

	THFTMLNETTLP
BmAAAP17 (XP_012547 368.1)	MIEKCGRGKHLRRRQDKAIMEKNKSQSVKVDNFSSTIGLAANPGFQSTLS IASKGLPQDDKPYNPFHRNVQHPNTTGLSILHLLKSCLGSGILAMPAAFK NSGLVAGVIGTILAGFVCTHTVHILVKTSQQICVEAKRPSLSFAETCGAAF MYGPKRLRSWSGAIQKFVDYSLSVTYLSVLCVYVVFVIGSSLKEALDVYM PGYQLSIQAYCALSLVPLVVVCQIRNLKYLPFSAIANALIFLVFAITLYYMF FDLPPVSDRVMVANVSTWPLFLSTVIFAMEGIGVVMPIVENEMANPRRFLG CPGVLNTSMFIVITLYGVFGFFGYVQFGDDVKGSVTLNLPQDEIIAQS AKLI MAFVIYLYALQFYVPMEIITRMLATRKSNSYENLIQITIRTCLVTLTVAIGA AFPNLELVIGLVGAIFFSTLGLFIPVAVQTIYLWEKDFGRFNYILWKNIIIAIA IIALVSGAYVSDIGILEDGRHTVINIVDENSTVT
BmAAAP18 (XP_012547 428.1)	MFYAIFGGECTQHEIVKNHATNIKMGGVEKKDGIVLNNFNSTANLTSNSG FQSTLTLSKEVINEKAYDPFEHRNVEHPTSTMGSLAHLKSSLGSGVLA MPAAFKNAGLVMGVIGNIFIGFICTHCYVVLVKTSQEVCVEAKKPSMGFA ETCGAAFEFGPKLRPWSNFVRIFVDYALTCTYLAALCVYVVFIAENFKQ VLDVYAPNDNLSVQAYCALTLVPLVMSQIRNLKWLVPFSAIANVFLVICF GITLYYIFKDLPVKSEATMVASVSKWPLFISTVVFAMEGIGVVMPIENEMA KPQHFLGCPGVLNVAMTVVVTLYGLVGLFGYMTFGDTVHGSVTLNLPKD DVLAQAAKILMALAILFTYSLQLYVPMEMIWRQLKDKITVRYHNITQIAIR TAAVVGSVILAAAIPNLELVINLCGAIFLSTLGLLTPAIVDTVHNWDRGLGF FYWKLFKNIFIAMISLLAFFAGTFIAIQDMVNKISADPVLEKHLNTRTS
BmAAAP19 (XP_012551 575.1)	MGVAGQSITLANSIIGVGILAMPYCFQQCGILLATLILLTMGLVSRLLCCYFL LKSALLARRRNFEFLAFHVFGPAGKMAVEIGIIGFLMGTCIAYFVVVGD LG PQIISKMLNVNQSDILRTSIMVVVSLVCVLPLGLLRNVDSLSNVSAATICFY LCLVVKVITEATSQLFEEELQNRMELWKPSGVLQCVPIFSMALFCQTQLFE IFESLPTLSLEKMNLVTKNAINICTGVYFTLGLFGYIAFCSQDISGNILMSLS PTMASDVIKLGFVMSLAFSFLIIFPCRASLYSFLYKKGIIVLGLIIMVLGTY ANLQAAEGKHERYDEKYITQEKIDKMVEDFFQKREKLEKIIPAAEGEILPD DAQKIIESNIIRESEVQPPNPVPPDSSKEKIPDIALI
BmAAAP20 (XP_012551 796.1)	MSKKHLHNQAAIPLAPAVFKKQRLRPMIAEYDSKKKGVRNDLSDVVMIK YNVDPSEIPVEQQAGSTLPLMEIPGKDVEADEDYNPFEHRKLAHPTSDMD TLIHLLKGS LGSGILAMPIAFKNAGLFFGLFATFAIGAICTYCVHVLVKT AH ELCRRMQKPSLGAETAEEAFLSGPPSMHKFSRLAKAMVNWFLVLDLLG CCCYYIVFVSKNVSQVVDYEAEGTSFHNHIRVYMAALLPFLIMMNLIRN LKY LAPFSMIANVLVGTGMGITFY YLFQDIPSVSERDSFAEISTLPIFFGT AI FALEGIGVVMPL ENNMKTP THFIGCPGVLNTGMFFVVTLYAFTGFFGYLK YGDETKGSITLNLPESEKLGQCVKLMIATAIFFTYSLQFYVPMEI IWN NV R HWFGAKKNLAEYSIRIALIVMTVCIAIAIPDLGPFISLVGAVCLSFLGLIFPAI METVTFWDRPNGLGRFNWVLWKNVFMISFGILGFLTGSYVSIVEIIEGSSN
BmAAAP21 (XP_004934 379.2)	MEKTKPSAPPIQLVMDDNYSSKIELAYNGSREDMGPYVPANHRPME SNTS SFGALAHLLKASLGSGVLAMPLAFKNAGLLVGCIGTMLIGLICGHV IHILV KTSQQLCVEVKPALGYADTCEIVFQNGPKPIRKFA SIARELVDW SLAVTH MGACCVYVVVIAESFRQVSVEYGGPDWSVTAYCALTLIVLIPLTQINKLK YLVPFSAVANFVWLVSICISIIYYCLRDPDISERNMATSIDGIPTFISTSLFAM

	EGIGVVMPIENEMLKPPQQLGCPGVLNIAMSAVVVLYGFVGFYGLQFGE NVRGSLTLNPLDEVLAQTAKLLVACVMLLSFALIFYVPVDIAWRRIQDRIP AKTHRWAMSGRLRFGTLFIVGLACAVPKLELFMELVGAVCLSVLGLLLPS VIEIWRWGRDIGPHTHWIVWKNLVICLFAIIMVSGVTFAIKSMLENL
DmAAAP1 (FBPP00715 39)	MLAHSAHVMTLANSIIGVILAMPFCFQKCGILLSIVLLVLSNGITRVCCH YLIKTSLLTRRRSFEMGLHAFGTSGKLLVELCIIGYLIGTCITYFVVVGD GPQIIAKIFALDVADHLHLRSLVMVVTVVCIVPLGMLRNVDSLSAVCTAS IGFYVCLILKIVLEAQPHITANDWTEKVLWYEPAGVLQCLPIFSMALSCQM QLFEVFESINQSLDKLNGIVRNATWICTFVYISVGGFFGYVAFCTHTFSGNI LVNLSTSGSDIIGKIGFVLSIAFSFPLVIFPCRASLYSLLYRKGHTESSSYIPEQ RFRFITIFVVSFSLCVALVPSVELIIGLVGSTIGVAICIMFPASSFRKIIKESM ERTLAQFVFSVSGFLLMILGTYANLSAIDEKSS
DmAAAP2 (FBPP00727 24)	MNDDIKTVTVYPTTLELTPTKTSANGSNDDYDPHQHRELKNPTTNFQTF HFLKASVGTGVLAMPFAFAHAGYVNGTLLTLIIGSLALYCLHILIKCMYIL CKRQRVPYVSFSQAMNLGLKQGPWLRCLAPIAVPFVDGFLAFYHFGICC VYVVFIAESIKQLVDEYLVVWDVRIHMCIIIVPLLLIYSIKNLKLLAPSSAA NLLLLVGFHILYYIFEELPPLSERDPFVAAGKLPTFFGTVLFALAVGVILAI EENMATPKSFVGPCGILNSGMSIVLGLYVLLGFFGYWKYGNESSEGSITLNI PQSEIPAQVVKVFFAITTWISYALQGYVTAHILWDKYLAKRFKETRQTFYE LIFRAIIVLLTFGCAVAIPDLSVFLSLVGSFCLSILGLIFVLLQICVQYTEGYG PFRIKLIINLLLLCFGIFGGVVGTYVSILDIIAVYK
DmAAAP3 (FBPP00741 57)	MDAEAPNQLEKNQTATVPRQETAEGGSTGETAVGGAAAKVTKEQDHD YHPPTSYLETIVHLFKGNIGPGLFAMGDAFKNGGLLVAPLLTVVIAVVS QHVLVTCSSKMRDLKGDVSCADYAQTVEQCFENGPSKLRGWSRTMGR VDIFICVTQLGFCCYFVFISTNLKQILQAYDIDMNVHLVMLLAFFVPVLLSS LITNLKWLTPVSMFANVCMILGLAITLYALKDGLPEVEERALWTNGSQL ALFFGTAFAFEGIALVMPLKNAMRKPQFERPLGVLNVGMFLVSVMFMF AGSVGYMKWGEQVGGSLTLNLGDTILAQAVKLMVSAGVLLGYPLQFFV AIQIMWPNAKQMCIEGRSLLGELGFRTFMVLVTLAIAEMVPALGLFISLI GALCSTALALVFPPIELISRSELNKGPGIWCVKNLVILVALLGFFTGSYE SLKQIVKHFGEVEEH
DmAAAP4 (FBPP00759 28)	MGDKGGFDPYENRNVAHPISDIGAFFSLLKCVVGTGVMAPLSFNYAGIVT GIILLVSVCFMLIHGMQMLIICMIECSRMMQIGYATYPVAMVYSFDQGRFF KYISKAGRYIVDGVLAFSQFGVCVVYNVFAATLKQLVDFYVWVADLRIY IAVIALCLIPPFQIRKLYLVPFNILASILIYTGFSLMMYYLFDLPPITERNIL FGRIDKIPLFFGIALFSITSVGMMLAVEATMAKPRHYLWFGILDRAILLVII SYVTFGLMGYWRYGDETAGSISLNPTDEVLSQVAKGFIAAAIFLTYPLAG FVIIDIIIMNHFWNKNGDLPNAALKESILRACTVVLICITAIIPNLGPLLSLV GALTISLLNLVFPALIEICLYPPEYNYGKLLKVVLVKDIFYVIVGILILVQGT VFSIKDMISEWGGDTTTTGGPETTAEETTANMSATLTALTAAPPDALRFR FL
DmAAAP5 (FBPP00759 31)	MPVMTKNGHSNSAYVADHPDKLELAEKQKKNKAVVAKDPDYNPYHHRD VEHPTTNSSETLFHLLKGLGTGILAMPNAFRNSGYITGSIGTIVIGICTFCI HQLVKAQYELCRRKKMPSPMNYPMVAETAMGEGPKCFRVFAPYIGTVVNT

	FLLIYQLGTCCVYVVFVASNIKAIVDAVADTSIDVRLCMIILLPLILINWVR NLKYLAPFSTLANAITMVSFGIICYIFREPVTTEGKDAFGKPSNFPLFFGT VLEALEAIGVILPLENEMKTPQKFGGSCGVLNVSMVLIVFLYVGMGLFGY LNYGSAVLGSITLNMPEHEVLSMCVKGMLAFIYITHGLACYVAIDITWN DYVAKRLGAQRNALFWEYAVRTGLVLITFLLAVAIPNLELFISLFGALCLSA LGLAFPALIQICTHWYNTKGFQKVLVLSNFVLIIVGILGLVIGTYTSLKEI VLTSE
DmAAAP6 (FBPP00761 56)	MVNIVDSGSKHAPQEMEQLPGEGKVMYKIQPRKSDTEQALAGNDFDPF ALRDNPHPTTDNETLHLLKASLGTGILGMPFAFMCSGLIMGIFSTIFTAFIC THCSYVLVKCGHKLYRTRRTKMTFAEIAEAAAFQKGPKWCRGFAPVAKFS ILFGLFLTYFGTCSVYTVIVASNFEQLISYWTGTAVSLRMLICIMLVPLILIA WVPLNKYLAPVSMVANVFMGLGLGITFYLVQDLPPVEERESVWSTLP QFFSITIFAMEAIGVVMPLNNMKTPQSFLGICGVLVLSQGMMSGVTLIYMLLG FLGYLRYGSATGESITLNLPIEWPAAQTVKVLISLAVYCTFGLQFFVCLEIHW DGIKEKCKKRPTLVNYVLRVTVLTAAVVLAVAVPTIGPFMGLIGAFCSILG LIFPVVIELIVHWESGFGKYNWILWKNAIITLCGIGALVFGTQAAIKDIVKA YSNNENVGE
DmAAAP7 (FBPP00792 71)	MEDLTPLTNLQQIPEGAPRKKKMTERQPLLLQSDASDYEGSRGSAARPV SSPPDNTLVNVHSEDSLAAASGSGDDEIGSTDKSYNPTHHRDLEHPTSNFDT LVHLLKGNIGTGILAMPDAFKNAGLYVGLFGTMIMGAICTHCHMLVNC SHELRRFQQPSLDFSEVAYCSFESGPLGLRRYSMLARRIVTFLFITQIGFC CVYFLFVALNIKDVMDHYKMPVQIYLLIMLGMILLNLVRNLKYLTPVS LVAALLTVAGLAITFSYMLVDLPDVHTVKPVATWATLPLYFGTAIYAFEGIG VVLPLENNMRTPEDFGGTTGVLNTGMVIVACLYTAVGFFGYLKYGEHVE GSITLNLPGDLSQLVRISMAVAIFLSYTLQFYVPVNIVEPFVRSDFDTR AKDLSATVLRVVLVTFLLATCIPNLGSIISLVGAVSSSALALIAPPIEVITF YNVGYGRFNWMLWKDVLILIFGLCGFVFGTWASLAQILNDRTH
DmAAAP8 (FBPP00841 26)	MFFFRRQNAKPAPRPSRAPSFALPKRRPPVQLTPSHQHDQLPFLRRSRFSA LPHFRAYEDEPENLSLFIAILYVVDLFGIFPFVTLPALLVKLG YFGILLVLSIII LQIYTSFLLSQCWTMAELLDPSIQQKRNYPYAALAEAYGPYMSLLVSVL LDLSIFAMAVPSVVMMAQNLEGVVL RMSAGQYNFSYCYWAIIVGLVICPL MWLGSPKHMRLAIIAVCMIVIVALWFLFAAPAIGTPFEGISLELPGFL TVLNSYSILAFQFDIHPVLLTLQIDMKQKSQVSWAALIGIAITCSVAIFGSIIA AYKFGSMIADNLLQSLPTSVPFYVMLILMALQLCFSVTVASSAMFMQIEN YFKLPESLSFKRMLIRSSVLALEVLVAEFVPSFDALMDVVGTTITGPLVFIL PPLLYRRIRRMERVHQRIAAEASYGSLPLDLNYDPVDLEMEPLLVISPPTP RGCWLRVRLHRLECDV SCTMAVLIFGLLATFLSTYLNIFSLASLFTNNSP CLSNLTKHF
DmAAAP9 (FBPP00867 03)	MSFIAKLLKATPLPLRNILNVAVQTARQQIPERKDYEQPPGSTAQQHHHSQ QAQHKAMEAGMDGGDTTESSNPFNAGSWTNDGEGGGDGDGEYRNE YQSTSFNEYDGRYQQTDGFRQGSIASEGSSFVCEGEGGGGCKIDEFQAAW NVTNAIQGMFIVSLPFAVLHGGYWAIVAMVGIAHICCYTGKVLVQCLYEP DPATGQMVRVRDSYVAIAKVCFGPKL GARAVSIAQLIELLMTCILYVVVCG DLLAGTYPQGSFDSRSWMLFVGIFLLPMGFLKSLK MVSTLSFWCTMSHIV

	<p>INAVILGYCLLQIGDWGWSKVRFSIDMENFPISLGVIVFSYTSQIFLPTLEG NMIDRSKFNWMLDWSHIAAAVFKAGFGYICFLTQNDTQQVITNNLHSQ GFKGMVNFLLVIKALLSYPLPYAAACELLERNFFRGPPTKFKPTIWNLDGE LKVWGLGFRVGVIVSTILMAIFIPHSILMGFIGSFTGTMLSFIWPCYFHIKI KGHLLDQKEIAKDYLIIIGLVLFVIGIYDSGNALINAFEIGLPIF</p>
DmAAAP10 (FBPP00869 94)	<p>MADNKGFTPDGQESLPSAPTVENPPPYTNAINDFNKANKLTKELSLTDDP YHPFEHRDPNGASAGGALAHLLKSSLGTGILAMPMAFHNAFLAFGMAM TLIVGFLCTHCVHILVKTSHDICRDAKVSALGFAETAEKVFEYGPKGMRPY SNFAKQFVDIGLMATYAAACVYIVFIATSFHDVINYDLKINWDVRIYIALT VIPCLLIGQIRDLKWLVPFSMMANIFIVVTFAITLYYMFDEPLVYSDKPLIA KAAHIPLFFATVIFAMEGIGVMPVENS MRKPQHFLGCPGVLNIAMVTVV SLYAIIGFFGYVRFQDQVRGSITLNLPEGAWLGDTAKLLMAVAILFTFGLQF YVPNEILWRKISHKFSPEKHNTQILLRSGIILLSSGGVAAAIPNLEPFISLVGA VFFSLLGIFVPSFVETVYLWPDRLGVCKWKLKLVKNIFLGVFSILALVAGAVA SINEIEMYSDDD</p>
DmAAAP11 (FBPP00872 94)	<p>MEPKSQDQAPNRDDPDLQTEPLTIAQSITSFYMYNPNYEKRSVEVPLTNC AFISLLKCVIGTGILAMPLAFRCSGFVMGTVMMSILLMILLTYSIHLLIADMT ECCRRRRVPQVSMPEAVRIAYEEGPKWINCFGRAAGFMTTCVLFVFGQFL CTVYLVFVSKNFKEIGDHYIERYNERYYVLVACLILLPLFMIRRLKYLPL NLISNFLLYAGFALIMYYLNFGLPNINDREMTTPVVEWIEFIAIAAFSLTAVG SMLVVEAHMAHPQSYLGLFVNLAVL FILLSNMFFGIIGYWRFGDNVHA SITLNIQDEILSQFIKVFIA SGIFLSYPLNGFVVITVMFSDYENSEPRGRYRT LIEYVVRLLFLFTGAVAIGVNLAAALTELEGAFSLSNLNLLCPALIDVFLN YNVGYGRLMWKLRDILLILIGLIFGIVGCTVALMQLIRDFQLTLNSM</p>
DmAAAP12 (FBPP00877 43)	<p>MNMNMNDSRRNTATEFSYILQRQGSVSVAEAYAFDDFNIMKNNHQTH QQQGQPQQPHQQQQPPQQQQQQHRQHSQQQQQAQQDAGLGDTLSS LPQASFNYSIVGSGVIGIPYALHRAGFGLGLALLILVAYITDYSILMVR GHICGRFSYPGIMEAAYGKYGYLLSLLQFMYPFLAMISYNVVVGDTL VLRFFPSWGGSMGAVRLGVVFFVNVGVVMPCLCYKNVSRLLARAFSISL ACVVFILFAV IIKLMSGDYKVTDAESWRFANS DLIPATGIMVFAFMCHHN TFLVYQSMRDATMERWEKVTHISIGFAWTVAALFGIAGYSTFRALSQGD LENYCWDDDLMNFSRVLFSISILLTFPIECFVSREIVRALVHRFVLKEPISE TQDKDPSLEKGAIDEYSKAITMAIVFSAFVISPMTDCLGSLVLELNGLLAAI PLAYILPGLAYIQMEPHALLSREKLPALGLVVFVFGALVTILGA AVLLPGLMG GDCRSDIVMGYCRQEFQNTTSSN</p>
DmAAAP13 (FBPP02894 25)	<p>MRNTRRRRLDQKLPFHQRLLGGVQNSFGSPLANEARLSSKKDNGMSDLE AFINVLKCGFGTGCLAMPYAFLNSGWLVLGLICTFALGFFVLYAMHILLHHI NNLGVQHNMPMISYRKAVEL SIRKGPSIFHFLSKPFGYLV DILLCAYHFGV DCVYVVFIAKSLKHLGDMYLWVWDERLYMALIASPLILTLIRNLKSLVPF SIISNILLTGYCVILNYLFRDLPEFEHLHAIQPLRNFPPIFGTVLFSIESVGI LSLGRSMRKPESLMGTCGVLNQGMIVVISFYAVFGFFGYWRYGENTSNSI LQNMPQNDILPKLATGIFALAIFFSYALQGYVTVDIWRNYLEPELEDRYLR TVECLLRIALVIASVLVAIQYPDFGLLSLVGSFCLAQLGLILPGIVDICLRY EEDYGP GKIFLIRSM LFICMGLAGGVAGTVVTLQTLYARYPVVVRG</p>

DmAAAP14 (FBPP03027 03)	MSFHKSDSRTPLAPTEYTKIPTVTAGYGENEKPKGGKGGQSKFIRSDMAD VPVQQAAGSTLPLVISRKKGDDSEDGNYNPFHRKVEHPTSLETFFVHLL KGSLSGILAMPMAFASHAGLWFLVATFAVGTLCYCVHILVKCAHILCRR RKIPMMGFADVAEQAFLDGPPALNRWSRFIRFMVNTFLVIDLLGCCCIYLV FVATNVEQVVRVYMETELSIRVWIMIVTAPLIFMCLVRNLKFLTPFSMIANI LMFVGVITFIYMFSDIPAPVERPGIVSVTEWPLFFGTVIFALEGIGVVMSSLE NDMKNPSHFIGCPSVLNFGMGLVIALYTLVGFFGFLKYGPETQASITLNLPL LEDKLAQSVKLMIAIAIFFTTLQFYVPVTILWKGLEHKIRPEKQNISEYGL RVFLVLLCGGIAVALPNLPGFISLIGAVCLSTLGMIVPATIELAVYHEDPGYG RFNWRLWKNSGLILFGVVGFAVGTYSIIHFHAEFSSGH
DmAAAP15 (FBPP03065 36)	MPKRDLTVLHRYFSGRLFPARTQQQSDQKAIEAAGEMGRTEITGRQND KSLEKNPERFTKNVTEKGADPENGDPVRRRGHETSELEAATHLFKGSVGA GLFAMGDCFKNGGLAGATILLPIIAVMCVHCERMLIRGSVLAVERTPGVDF LDYPETVEKCFEHGPRPLRKMSRVMKLVEMFLCVTQFGFCAIYFVFITEN LHQVLQONGIVISMSMVMLITLLPAMIPSLMTNLKYISPVSLFANVALLFG LIATLTIASFSDGPMPSVGDRHLFTGGAQLALFFGTALFSYEGIALILPLRNS MRRPEKFSTRFGVLNSTMFFTTALFIFTGFVSYVRWGEEVAGSITLNLVVE EVFSQVVKVIAALGVFLGYPIQFFVMIKILWPPLKRSNNCTQKYPITSQVC LRFFMVMMTFGVALVVPKLNLFISLIGALCSTCLAFVIPVLIDFVTRAQVP KALGVWSYIKNILITVAVLGIVTGTYSIVEIVKEFK
MsAAAP1 (MSEX2.013 32-RA)	MSKSGLETRAAGSKATETPLVAKTELEGGDGNKGGGLSTTQTAFLIAG EMAGSGVLALPRALVKTGWVGVPIIIVMCMVAAFSGKRLGDCWTHIEDRD PNMRSRKRNPYAIIEAETLGKTWSVIVSMAIIVTLFGASVVYLLAAQIIEQ VFLAIVPSLTICTWYLIVVGAMTPLMFFGTTPRDMTFTGIIAFGSTVIACVLY FIEMMNEIHPFVFRWGIHGFQDFFLAFGTIMFAFGGASTFPTIQNDMTDKT KFSKSLHYSFIEIWDMIVEENAAILLYLPIAIGGYAVYGESVASNVAASLM ATPLTLVANVLMAIHLVFAFIILINPVCQEMEELYSVPQDSIGWRMAVRLSI MAGILFIGESVPRFYTILALVGGSSVALLTYILPSYCYLSLISQAPRPGQAAV ETPGWMKMVCYEVIALGVLGGIASSTYSAISAFSTAQATPCYL
MsAAAP2 (MSEX2.013 41-RA)	MKDKEPKVEVSHITGSTVTISHDGSNGTDGFGMFQSREQIIRPDSKSQLEL ESGKTTGTQVTHPTSYLDTMLHIFRGNIGSGLLAMGDAFKNGGIVFAPIM TAILGVMCVHAQHLLLNCSEDMHRQTKRDKPPGFAETVHLAFQNGPVRM RPLANTMKILVNTFLCITQLGFCCVYIVFIANNLKMICDQYNINIDLSIHMII VVIPVLLSCMVRNLKYLTPFSTIANIMMAVGAVVVIYKATLDLPPVNTRTY LASWQQPLYPFGTAVYAFEGIGLVPLKNEMKNPEEFQKPFGLNVGMVV VGCIFITVGLFLYKLGEEVAGSLTLNLQPGEVMSNVVQALIALAILFTYP LQFYVPVDITWPPLRKRFRASPVAKELGYRALLVLLTFILAESIPQLGLFIS LVGAVSSTALALIFPPLIELVASSQKPTGITTFMAIKDIVIILLGLFVFTGTYS ESIASIVRAFQK
MsAAAP3 (MSEX2.017 60-RB)	MSSTERDERREQQAHEEPQENQEIQEQQNVSQEQREEEGTSSKRERTLE RKTSAYSLSLSQYMECMEMRESTGYQVYPGTEREDYDFNAERFGVYSTN LIESTAHLVKGCLGAGILSMHEAYMFAGLWTSVIVTIILATIMSHTMMMLV KSAQKMYPLLRLPRLTYPDLLEAVATGPWKGLRCFSKCFRYAADFFLFFQ MCGTCCIYEIMIANITLKGVLEAVSDSLQESNYDVRIYILIITVPLLAICLIRS

	LKYLAPFAMVADTFVAICVLTIIYYSLKQAQNISDRPAWKSFSGVIRFCGIC LYSMDGIGVTLPVENNMERPRYFYVVVAYGMTIVITSITITGFFGYWGWG EECTSPVTIHMPMTDTLPILQLMAAMLSITFAVNFVWPFRVWVWHYIGRK YKRNRCFWERIFRATHVILITAIITFPHLIQLMIFIGNFPLVFIASFVPLIES LVTWKDDTLFKGVVRWRIVKNCIILFGFTISTSNLVAYGEGE
MsAAAP4 (MSEX2.017 61-RA)	MELNSNCISHTQTLEFKDLSTKPPPQPPPEIEKKKYVLHSEKENYDFVAYR STRKPTNVLESTGHLIKGCLGGGILGIHEAYMKCGLWTSLIVTIVFGFYITY CVHILVKSQAQMLYKRLHIPEMSYPDVAEASLEVGPFPKLRKYSKWFRYAV DITICIDLFGACCVYQIIIAKTIKQLAMNSTEVPAEDLNLRLYIFALLVPILL LCMITTLKYLAPFTLIADVIVACVIATVYYSLREAPNISEVPSWKGVIGFFE FCGIVVFSMEGIGVSLPIENNMKDPKKFPLVLCGGMSVVVSLILVGGFFGY WGFGENSRSPVTLNFPPDVFPITLKCLMAVMIFVTFALNFWAPFNLVWHY VSRKHDPKRYWLWERVYRAIFIVVITAIATAIAFPNIGNLMGLLGAFCLSNMG FIFPAIIELLVWENPGLGRYKRWLWKNVFLVIVGVLLFVAGTYSNAKGLI ANL
MsAAAP5 (MSEX2.017 62-RA)	MATPKPSTGGPGNFTVIAQSEEEEEAFNYVQFRHGVKFTSVTGSVAHIVK GALGGGILSGHVAYMKAGVKVAVPLNVLFGFYMGYCLHLLVQSAQTLYK RTRIPMSYADVGEAALACCPNRRLARFAKVFRHMIDVIICIDLFGACACY HLIIGKSLKQLVENTIETSMEPLHPGYPSLRVYMACMIVPIICILHLKWL APFSLAANMTIVFCIIMAIYYAFEYNPNFENLVGHTSLSLYHYLEFVGMTVFS MSCAGVVIPIENNMREPKKFPLALTIGMSLIVICTFLVSFFGYAGFLEKSEA PITVNFPMTVVALIFKYAVIIMYITHALNFWPPFNLVFHYLKKRHSRPERIVL WELLYRAIFVIIIIVAIIFPNINALMGFLGTFCLSNMAFIWPNVINLLVIWER PGFGQYYWKLWRSIVFILVGIFILFCGSLVNIMELLTVFY
MsAAAP6 (MSEX2.047 86-RA)	MVNDNNGTVPAPELETFLSPEEKNKEKIVSKYNMTKDEELGEYDPFADR KLENPTSNMDTLTHLLKASLGTGILAMPYAFKCAGLVLGILFTVLVAVVCT HCSYILVKCAHVLYKKTRRNNMTFAEVGEASLKNQPALRKWAKSFRIFI LVSLFMTYFGTCSVYTVIIAKNILQVVAHYMGVKPEDVEIRIFIIALLPLIL MSWIRNLKYLAPVSMIANLFMALGLGITFYLVGTGKMETENISGMLFKS YHTWPEFFSLTIFAMEAIGVVMPLNSMKTPRSMLGFCGVNLKGMMSGVTL VYILLGLLGYLRFELVADSITLSLDNTQKLAQTVKISIAIAVFCYGLQFY VCVEIMWNGIKDKFTKRPDLADYITRILVTACVLLAVAVPTIGPFMGVIG AFCFSILGLIAPAIIEIVTYWDIGFGTGNYLWKNILVMIFGMFSLVFGTKDA VTSIIMELYKK
MsAAAP7 (MSEX2.049 28-RA)	MLKSNLFRSPYAAIAELAFGPPARRLVTFLLIDATVFGSGVPNIILAAQSMQ LFWWKITGGNVGITYCVWMLLLGVILCPVMWLGSPKDMKPLALTSVFIV STIAICTWTCIIMDNVTPLSVTNLMNYRPQSGDFLMAYGILAFQFDIHPML LTIQVDMRDSRKINTAVLGGFAVTGFMFTVTLLMATRYGINIDNNILQTIP PSIPLYVIALLVTLQSLSSAVGNSALFQHIEDLLKIPRNFICQRCLIRSSIAL AVFLGESVPRFDLVMGLVGSTLTGPLMFIFPPLIFLRLCYIKSVKDANVDLS NRLKNGVKPNGIANGVQNGRQRWPLIKESLETKYNTFTSTYVEIHPKRYD GYSIKWYDVLLALIVMSMGIGATIVATYSSWSDTIAYAEFSPPCLINATIAA RSFLRISSSVL
MsAAAP8	MTNVEKTAPEKADYNPFHRKVEKPNSDLRSTANLIKASLGSGLAGPLA

(MSEX2.056 49-RB)	FANAGWGVGLVGTIFVGVICGHCVQILVETSRGCCKIEKKPMLGYAETCK TAFKNGPKCVRSYADVASFVAEFALLSTYVGVCCIIYILISDSVKQLVDRY VPSVILPVEYYCLILLVPLILLCQIRYLKFLAIFSLVANVLLVATYVICLYYIF GDGFSISDKKIAGDPARYPAFISTVIFAMEGIGMVMMPVENAMKKPQNFLGC PSVLMVAMTAIVFLYSTLGLFGYLQYGDVLRGSITLNLPTDEWPAVCAKIF IALSIFFTFPLQFYVVIDIFTKYTLPRISGKHQNIVQVAARTIGVCCCVGIGM ALPLLEQIINLVGAIFYLGLVIGVETVFKWENLGRYNWIFWKNLLIVVF GLGSLISGCTVTIMDIKILSQKTE
MsAAAP9 (MSEX2.056 50-RC)	MIESKDKSDGEYNPFEHRNIKNPNTDIRSLANLLKSSLGTGILAIPLAFASS GWALGIVGTITAFVCGHCVHIFVMTSRGCCKVERKPLLSYSATCKAAFAN GPKATRPLATTAFLFAEFSLFFTYIGVCCIFTVLIADSIKQLFDRYVTTNISV EYYCLFILVPLSLMVQIRHLKWLAPFSLLANILLIATFAICLYYIFRDELNFS DKKPVGDPARFPAYLSTVIFAMEGIGVVMMPVENMMKNPKNFTKILTIAAMA TILILYSALGLFGYFRYGDVLRGSITLNLPIDDWPAICAKSFIALSIFLTYPLH FFVVDIFTRHVEPQIQKKYRSISQVVVRIACVWVCGGIGIALPMLEQIINF VGALFYSILGLIIPGVVETVFRWDNLGKYNWILWKNLIVLFGMCCLLSGC AVTIMDIIDKLHNKTE
MsAAAP10 (MSEX2.056 51-RA)	MANSYNMKEFSSTAIITENSIYPSTISISTINTKCKEDDLEMTAYDPFQNRKL EHPNSDIRSFANLLKSSLGSGILAMPAAFKNAGTIVGVFGTIIILGYICTHCV YLLVKTSEQEVSKVAKAPSLGYAETIEAVFAHGPQPLRKLRSRIFIDWTM AFTILGACAVYVILLVDSVKQIVDHFYGPDVINKTMYFLMFLVPILLFTQIK NLKYLAPFSGFANVLLILTLICLYYICSEFPDLDSRPMSANIGDLPLFIGTVI FAMEGIGVVLVENTMAKPQHFLGCPGVLNITMTVVLLYVMVMGFLGY VRYGDEAKGSITLNLDTGEIPALMAKIFILAIFFTYTLQFYVPMIEVWRNT KEHIAQKYHNTAQCIMRAIFATLTVA AAAATLPQLEQVIGLEGAFFYSFLGLI APSMMDLIFNWERGFGKYNWILIKDLLLLVFFGTFLIAGVTQSLREIIRTNS
MsAAAP11 (MSEX2.065 88-RA)	MRPMIAEYDPKKKGKNDLSDVVMVVKYKVPNEIPVEQQAGSTLPLMEI PGRDIEADEDYNPFEHRKLAHPTSDMDTLIHLLKGSLSGILAMPMAFRN AGLYFGLIATFAIGGICTYCVHVLVKTAEHEL CRRMQKPSLGAETAEEAFL SGPPSMHKFSRLAKAMVNWFLVVDLLGCCCVYIVFIAKNVSQVINHLQ GTVWYDMDIRVYMAMLYPFLIMMNLIRNLKYLAPFSLANVLVGVGMG ITFYYLQDIPSPSDRDAMADFYRLPTFFGTAFALLEGIGVVMPLNNMKTP THFIGCPGVLNTGMFFVVSLYAFVGGFYLYKFGDNTASSITLNPNEILLGE SVKLMIAVAIAFFTYSLQFYVPMIEVIWKNVRHLFGAKKNLAEYSIRIAVITM TVCIAIAIPDLGPFISLVGAVCLSFLGLIFPAVETVTFWDRPNGLGRFNWVL WKNIFMISFGIVGFLTGSYVSILGIIHGEE
MsAAAP12 (MSEX2.079 96-RA)	MGTAGQSITLANSIIGVILAMPFCFQKCGVVLATLILLSMGLVSRLLCCYFL LKSALLARRRNFEFLAFHVFGPAGKMAVEVGIIGFLMGTCIAYFVVVGD GPQIIAKMLNINQSDILRTSIMVIVSLVCVLPGLLRNVDSLSNVSAATIGFY FCLVMKVIAEAASQLLTGEWHTRMEMWKPSGFLQCVPIFSMALFCQTQL FEIFESLPSLSLEKMNLVTKNAINICTGVYFTLGLFGYIAFCSQEISGNILMS LSPTMTSDVIKLGFMVSLAFSPLIIFPCRASLYSFLYKKVHSSHHDHVMN HSIPERSFRCTVAIIAVALFISLLIPNIELVLGLVGSTIGVLICVVFPAACFVNV TFKNTNERVLAKAILLLGLIIMVLGTYANLQAAETQLDRYDDKYITQERID

	KIVEDFFEKRGKLEEIKVKPLPESVNPDPPIIIDNIIKDSEVQPPNPVPPD MSNEKVPNNPIKELKEKHEVIKTSAEKLSLH
MsAAAP13 (MSEX2.095 82-RA)	MYFNKSKVVFTKPAEIKCRILLCFSVQVKTSQEVCEAKKPSMGFAETC GAALQFGPKLRPWANFAKTFVDYAMTATYLAALCVYIVFIAENFKEVLD VYMPEYQLPVEAYCALTLVPLVLICQIRNLKYLVPFSAIANVFLVICFGITM YYIFNDLPNPKEREMVASVTQWPLFISTVIFAMEGIGVVMVENEMAKPQ QFLGCPGVLNIAMTIVISLYGIVGFFGYIKYGDDVRGSVTLNLPADDFLSQS AKILMALAILFTYSLQFYVPMEMIWRQLHNKISVRYHNISQISIRTAAVVGS VAIAAFPDELEFINLSGAIFLSSLGLLTPAVIDTIHKWDRGLGRFNWILWK NIFIALISLTALFSGSFTSIKSMHLKFGNTHLEAALNRTSMFNETMAV
MsAAAP14 (MSEX2.095 83-RA)	MEKERPSAPEIRTVMDNYSSKIELAYNGSREDLDPYVPAEHRPSESNTSSF GALAHLLKASLGSGVLAMPLAFKNAGLLVGCIGTVLIGFICGHVIHVLVRT SQQLCVEVKKPALGYAETCDLVFQNGPKPVRKYATFARELVDWALAVTHI GACCVYVVVIAESFRQVSIFYGGPNWSVTAYCALTLIVLVLPLTQITKLKYL VPFSALANFVWLASICISIIYCLRGTPKISERNMATSISGIPTFISTSLFAMEG IGVVMPIENEMVKPQQFLGCPGVLNIAMTAVVMYAFVGFYGLQFGEEV RGSRTLNLQDEILAQTAKLLVACVMLLSFALIFYVPVDIVWKRVEKIPAR GQRWGLAGIRLVGTLFTVGLACAIPKLELFMELVGAVCLSVLGLLLPSLTE TVWRWGRDIGPCHVWVWKNAILGVFSIVAMISGVAYAIAMIEKL
MsAAAP15 (MSEX2.095 84-RA)	MEIVKVTDNLRVADSRNMMNSTHSTVTLDRKGVEEPEEYDPFEHRNITH PTSTLGAFHLLKSSLGSGFLAMPAAFRNTGLIPGCIGTALVAVIATHCVHIL VSTSREVCKEARTAAMSYPDTCWVFKLGPKLRKYSTHVRHFVDSAM AGVCLGGTSVYVIFIASSLKDIFDHFPEHKLSVEAYCGILLVPLILITQIRYL KFLVPFSIFANVCLVLTFGITCYTFQDIPWPNEAELVTGVTRWPLFLSTAIF AMEGINVVMPIENEMAKPKHFLGCPGVLNSTMIFVAVVYGIVGIFGYLKY GNTVQGSVTLNLPQGEILALVAKVLVATAVFFTYCLQMYAPMDIHWTRLRG NFSKRYHNVSQIGMRTISVILTVLAAAVPDLELLIGLVGAIFFSTLGLLIPV VVETVHKWHRGLGPGIILWKNFLLLFYFVLLSGCYSASEIVAKYTR
MsAAAP16 (MSEX2.095 30-RA)	MSDEKQPLLTGPNIPDYIEVQPVELTAGSLATPDEKPKPDYHPASERCLEYP TSNFDTLIHLLKGNIGTGILAMPDAFKNAGLIFGVFCTMVMGAICTHMH VLVQCSHELRCIRSQRPALSFSEVEDSFASGPISFRPYAKKMKKTIVNVFLVT TQLGFCCVYFLFVATNLQDSLRLFHINLPVHVYLVLLFPILALSMVKNLK YLTPVSLIASIMTAWGLVITFYIYLQDLPHTDTVKAIATWHQLPLYFGTAIY AFEGIGVVLPLENNMKTPEDFGGWTGVLNTGMVIVGALYTAGVFFGYLK YGNHVQGSITLNLNPTLLAQSVRSVMAAAIFLSYGLQFYVPMNIVWPYV KSKLTSEQALKYGETVTRFVLISTTFLAAALIPNLSGIISLVGAFSSSALALIF PPIIEIMTFWPDQLGKYDWKLWKDVVHIFGITGFVFGTYTSIENIIIHT
MsAAAP17 (MSEX2.099 62-RB)	MAAFEAVSRIRIQPMNRASFIDFRTARLPLQTPEIDDFDPSLQREPKNPIKL WMAYFNLLRTVFGAGVLGLPLAISQAGIILGPILTIAIGFLIVHTRMLLRC LNEVSRQLKIPYISYRYGFRIALLHGPICQFFGHFGPAIATFMILSQLGICT VFVCFSTSDSLRDIMDWQSSQTALLALLPYLLLQFFMKTLKIVSYVSLMG NLLNLIGLILVFYHIFDDPHGEYIDATTDALPVLMSIGSFLFNLSAVGVVLSL DKALQNPVKVLTEKFGVLDIGILIPTLVATIFGVLYWVSGTMEENILRSLPY DDDTAMAAIGLYLIAIAFAHPIQSYPGIILQIILEVIKNRDLMHPPSEQSMKLV

	MVVRPCFVLASFIICYLIPFQGPFIQVGNLCTTLLALVFPATMEICLMPYPGP YGKYKIYLYKNLFIILGLFTWAYGVVLSGYLIYVRLVARSPNDLDT
MsAAAP18 (MSEX2.104 25-RA)	MPKNILAE LGSQVGLTPARQNKKEAE EWSRRQSGPKINPSFEPDDFVPHSL SPVKDEKKRPGDAGIFMVMNMEKKNLQEV EYEPYDNRVVAHPTTNTETL LHLLKGS LGTGILAMP HAFSNAGY MVGSIGTVVIGVLCTYCIHVLLDSTY ALCKRRKVPSLTYTAAAEAAALSEGPAWCKACAPYAAHIVNVFLLIYQIGT CCVYVLFVSENIKYVLTKKFGIDISLEHVMLCVLLPLILINWVRDLKYLAP FSAVANAVTIVSFGIILYYIFRDTPSLEGKSAAGAISKFPLFFGTVLFALFAIG MILPLENEMKTPKDFVGVKFGVNL RAMVTIILYVGMGLFGYLQYGN EAE G TITLNLPTETEILASVVQGLLAFAIFITHGLACYVAIDIVWNDYVGNRLLNS KHRIIWEYIVRTLIVLITFGLAAAVPALDLFISLFGALCLSALGLAFPFIQTC TYWYYYVSRSERIRMLIKNIIVVLFVGLGLIVGTWTSLQGIIEKFCNTDSGLE SVVNTTEASGFNGTTAH
MsAAAP19 (MSEX2.104 10-RA)	MTGERSGAGPTALRAFRGTGVSHREFPDSELRLNYILITNDRMVKPEKNNI DLN NFSSTAELTAHPGFQSSINIISSKEDKPYNPF EHRMLEHPNTTIGSIVHL LKACLGSGILAMPAAFKNAGLVTGSIGVLLAGFISTHTVHILVKTSQEVCV DAKKPSMSYAETCEAAFNYGPKGVRK WGHFVKNVVDYSMV LAYISVLC VYVVFVGS SFKETLDAYMPDNKLSIQTYCALTLVPLVLLCQIRNLKYLVPF SAIANVLIFIVFAITLYYVFVDL PPLKEREMVAEVTQWPLFLSTVIFAMGSIG VVMPVENEMAKPQQFLSCPGVLNITMIIVVALYGFVGFVGGYVQFGDQVK GSVTLNLPQDELMAQSAKFLMALVIYLYALQFYVPM EWITRMLKKRES DRYENVIQISIRIVIVSISVAVAAFPNLELVISFFGAIFFSTLGLLIPAVVDTV YHWDKDLGKYNVVLWKNTILGIISLAALVSGTHGDQSQRKAARYAGDII MRKSVRNQVHSLFLHSHSPVCICTNCFILKLIMDVIPV
MsAAAP20 (MSEX2.104 10-RA1)	MYSGYPKLCHVSKFTVRLITKDRMAKPAKNNIDLNNCSSTAELTAHPGFQ SSISIENKEDKPYNPF EHRMLEHPNTTIGTIVHLFKASIGSGILAMPAAFK NAGLVTGSIGTLLAGLICHTVHILVKTSQEVCVDAKKPSMSFAETCEAAF TYGPKGVRK WGHFVKNVVDYSMV LTYISVLCVYVVFVGS SFKETLDVYM PDNKLSIQTYCALTLVPLVLLCQIRNLKYLVPFSAIANVLIFVVF AITLYYVF LDL PPLKEREMVAEVTQWPLFLSTVVFAMEGIGVMMMPMVNEMANPQQF LGCPGVLNITMTVVIPLYGIVGFFGYVQFGDQAKGSVTLNLPQDELMAQS AKILMALVIYLSYGLQFYVPM EWITRMLKKRESEKYENVIQISLRILIVTVS VAVAAFPDLELVINFGAIFSTLGLLTPAVVDTVYHWDKDLGKYNVVL WKNTIIGIIALVALVSGAYVSILGMVEEFGQQELEGSHSNVTSL
MsAAAP21 (MSEX2.104 11-RA)	MRGKRFKMDDKIRLITNDRMAKSEKNNIDLN NFSSTAELTAHPGFQSSISII SKGKEDKPYNPF EHRMVEHPNTTIGSIVHLLKACLGSGILAMPAAFKNAG LVTGSIGTLLAGFICTHTVHILVKTSQEVCVDAKKPSMSFAETCEAAFTYG PKGVRK WGHFVKNVVDYSMV LAYISVLCVYVVFVGS SFKETLDAYMPDS ELSIQTYCALTLVPLVLLCQIRNLKYLVPFSAIANVLIFVVF AITLYYVFVDL PPLKEREMVAEVTQWPLFLSTVVFAMEGIGVMPVENEMAKPQQFLGCP GVLNISMVIVISLYGIVGFFGYVQFGDQVKGSVTLNLPQDELMAQSAKIL MAFVIYLSYALQFYVPM EWITRMLKKRES DRYENVIQISIRIVIVTISVAVA AAFPNLELVISFVGAIFSTLGLLIPAVVDTVYHWDKDLGKYNVVLWKNT MIGIISLVALVSGAYVSILGMVEEFGHQELEGSHSNVTSL

MsAAAP22 (MSEX2.114 74-RA)	MINLGRFKIPPLKNALDVALQTVRQQMPDKPGPPRPPQNVRFANLDNMG ESCELSTMNETQSPSYQSTNPTNPFLSGELQAEDSFTSYQNTYPQQDGAPR TQSMQSVDFYASSEEGGFEEGGGKPGAKINEFQAAWNVTNAIQGMFVVS LPFAVLQGGYWAIAAMVGIAHICCYTGKILVECLYEDDPVSGQRVIRDSY VSIACECFGRKYGARIVNMAQIHELLMTCILYVVVCGDLMIGTFPDGSIDT RSWMMLTGYFSLAFSILEVFKERQYAIILVYHEPFDHKRHCSWLLYTLHRR LGLV
MsAAAP23 (MSEX2.118 54-RA)	MKRFLRVLSRGQYLLRMCSTVPQCVRTPRASCHRSTDPSYCHKHTTVCLI LKIFCEGDVNEADGFRAAPRPPRARPGGSLKEGGVGAAGGAHSQCSRAS QSRPRRCVVVSPSTYSDTTHCTTTTTYHRDLHTTLMVEDNKAETVHLR AVAEQGQGEPPGGDQLTGDYDPHLHRNLPKPTNNWETLVHLLKCSLGTGI LAMPQAFARAGLVTAVVSTVVVGVLVTHCLHVLVQSQAACKRLRVPLL TYPESMAAALQAGPAPLRSLARPAAITVDVFLVVYQLGICCVYIVFIAENIK KIVDPHYGMPVEVHMLIILVPLIAFNLPKLLAPFSALANVLTFVGLGIV VYYLLAGKKSTQPLDLWGSPASFPLFFGTILFALTAVGVVIALENNMKTPK SFGSACGVLNNGMSIIVLLYVVVGALGYVYCVSECSDSVTLDLPPGPLATS VIVMFAVAIFISYGLHCYVPVEVVWRGYVLPRLQAAGVSAARRTLAEYAL RVALCLITFVLAVSVPQLGLFISLFGALCLSALGICFPALMELCISFPDKSGA ARLRLVKDAALFVVGVVGLLAGTYTALLGIIRTFQITPSSSTESPLHA
MsAAAP24 (MSEX2.118 55-RA)	MFIYEFMAGIVETITGGDEETYEPHAHRKVEKPTSYSDTMIHLLKGSIGA GILAMPDAVCRLGIMYSIIGLLVCIFATYCIQLLIAAQYLCKRWRRGYIA YPKSMRLALQDGPPCMRWAAGMSYFVDVTLVTWQLGICVIYFVFAEN LKQVCDYYGLELSIRIHLSCLLAPLTVLNLVKDLKLLTPLSTISNVVTVFGL ILVFFYLVEDDVTLEDEKLQMKRYEDIPVFIGITLFALEAVGVVLALEYNM EHPRQFVGLFGLFNIGMAIICLLYLLGVFGYLKFGNEVEASITLNLPFNQK KAQVAKVTFALAIFLSFPLQNFVGYNIMWRKIKKKINPSRQCPIDYTLRVV LVIIPWLLAVAAPHLGPFIALFGALCSLLAMVFPVMDACLWYPDRYGLC HYKLLRDIVIIIIVGMLCLVSGVYTSMLIEVES
MsAAAP25 (MSEX2.119 64-RA)	MTDDVSFESLRRTGISFQPD SHIPEVIANKYQVKATGEEARKYDFVTARPP ARTTNVLESIGYLTKSCLGAGVVAIHESYKDCGLWTGLILNIVLGLAISYG MYTLAKSAQKIYGRQLQIPALSYPDLAQATLEIGPWKSLKRFSKCFRYTVDF ILHIEIAGCCCIYQIVVARAIKQLVEGLDVTDSRVGTSPSIRVYIISLMIPCILL CMITNLKYLAPFSTVADFFIVIMAIATVYFAVKSANISPLEMSFFKSVPGVFE FIGVCGFSMDGVGVILTIENTSMTEPKLPTVLIGGMTLVMLLVTTVGGFFGY WFGENTTTPVTINFPWEPFPIIMKVFLALMIYITFGLNFWVACDVMWFY LKS RHEPKKHWLWERYRAVLVVFITIVAAFPNVTKFIGLIGSFCLSNLGF IYPAFIELSLDWEDPGPGVFYWRWLKFWVIFLWGLVLCIAGSYVNARELIIR VFHKKNES
MsAAAP26 (MSEX2.129 99-RA)	MEASLKYCSISGTLVLYLLIFVIVKGYAWGINVGTAWTETRAFKNAAVLS GMLALSFYIHNIIDIMRNARQDKNGRDLTIAFLLVITITYTMVGAVFYICF PLAKSCIEDNILNNFEMHDIMTAVARVLLLFQVVTVYPLVAYMLRTETMLL LSLQETRCYTMNTIVIMCVLVACFCPNVGTIIRYTGAIISGLVHVFAVPSL LQVRSLLRGRLTWWKSLFYFLIVVFGTVNLLMQFFITE
NvAAAP1	MAYFRGFFIPSLSATMNVAWETIKAKWPENSPCMELIRGPGPGARPPPGAG

(NV15949)	YDQQGEYREGADGAEMAELNVDAGGSYNGDQRHVTMAEDSFSYQRSG DKVRTGSVSSGFSEFDEGGGEGFGSGVKINEWQAAWNVTNAIQGMFIVSLP FAVLRGGYWAIAMIGVAHICCYTGKILVECLYELDPATGQRRVRVDSYVS IAKECFGPRVGARVVNIAQIHELLMTCILYVVVCGDLMIGTFPEGAIDTRSW MMLIGIFLIPLGFLKSLHHVSVLSFWCTMAHLFINAIIIGYCILEIGDWGWS KVKWSLDMKTFPISLGVIVFSYTSQIFLPTLEGNLIDRSKFDWMLNWSHIA AAAFKSIFGWVCFLTFQNDTQQVITNNLHSAGFKGLVNFCLVVKAVLSYP LPYYAACELLERALFRGKPKTLFPTIWTLDRELKVVWGLAWRVGVILFTIL MAIFIPHSILMGFIGSFTGTMLSFIWPCYFHLKLRNSMETSQVAYDCFVI FLGVLFGIIGVYDSGKELIRAFEIGLPF
NvAAAP2 (NV18592)	MSRSEDTLPVHGGNFKKTQMRPMIAEYDPKKHGVKTELSDMVLVKYK CEKNEVPITLTNGSTLPLVERPNDEEAALYNPFHRKLAHPTSMDMTLIHL LKGSLGSGILAMPAAFKSAGLFFGLFATFFIGAVCTYCVHILVKCAHVLCR RTQTPSLGFAEVAEAAFLIGPEPVQKYARLAKATINSFLVLDLVGCCCVYV LFVSQNVKQVVEFYTPPEHHMDLRIYMAMLLPLLIVFSLVRNLKYLAPFS MVANGLIAAGLGITFYIFTDLPAVSTVRPVASITEMPLFFGIAIFALEGIGV VMPLENNMKTPTHFIGCPGVLNIGMFFVVTLYSTVGFFGYLKYQDKTQGS ITLNLDEHDVLAQSVKLMIAAAIFFTYGLQFYVPMEIWKNIKHRFGARKL AAEYAVRISLVIFTVCMAIAIPNLSPFISLVGALCLSTLGLMFPSIHELVTVWE QENGLGRCYWRLWKNILIAFGVLGLLTGTYSIGEITAGPHPTPAAANLTD ALVGH
NvAAAP3 (NV11499)	MSQDNYGFTGSTD SIDPKRQNPFFENNGSKYTAKDNSNFSVVELEDKRKI AKELEGDYDPYKHREVQHPTTFWETLFHLMKGS LGTGILAMPKAFENAG YVVG TIGTIIIIGLLCTY CIRVLKSEYELCKRRKVPSMTYPGTMQASLEEGP KCLRRFSKYCPHICNTFLMVYQLGTCCVYTVFIAENLKKAMDNYVNPDI DLRFYMLALLLPLILINWVRNLKLLAPLSTIANFVTFASFAILYLFRDPID FTGRQTIGDVANFPLFLGTVLFLEAIGVIMPLENEMKQPKKFMNPCGVL NIGMALNIIYVGIGFFGYIKYGDKVYGTITTNLPEDEVLSSVVQILLALAI VTHSLQCYVAIDISWNEYIQPRMKHTSNLNQLIWEYVVRTCIVILTFILAVSI P LLELFISLFGALCLAMLGISFPALIQICAFWKVKSSKERVFLATRNIIVILF GLLGLVIGTYTSLEKIVIELGKMK
NvAAAP4 (NV16821)	MESMELHTKNATDMPDRLSKIAREIPLKDD SAGNGSSYGAFQSKDPILRL DKDVEARSGGDDGHGTGSSHSTSYFETLMHHFKGNV GSGIFALGDAFKN AGLV LAPPLTIFLGVICHAQHILLNCNQEVRRLGSSLETNPGYAATVELC FATGPLALRKYSVFMRKL VNLFLCVTQLGFCCVYFVFISSNMQVMK VV GVDLDVHVHMVIALIPILLSTWIRNLKFLVPLSSVANALIISGYIASIYIMCH DLPPVSERRYIADWSKLPLFFGTVIYSFEGITLV LPLKNEMKKPKNFDRPL GVLNVGMVIVGGMFVTIGFLAYLKYGDEIAGSVTLNLEPKEDMLQGEGY TFYNSLPQCIKL AISLSILLTYALQFYVPVAIMWPEFVRQFGPFNYPVVGEV LFR TILCIITFILAEAIQGLFISLVGAVSSTALALIFPPIISIVICWQNAKLDKI TFIKDIFILTIGFLGCFTGTYYVSVTEIVQAFSEGK
NvAAAP5 (NV16853)	MVEENLKAPTELDTFLPTDGSSLKDGALTAKYKVQV ASRDVETAAQRDG KSFDPFTERKVS NPTTDCDTLTHLLKASLGTGILAMPVAFQSAGLLGVFA TILVAFVCTHCAYILVKCAHVLYYKTRKTQMGFADVAETAFA SGPKWARP

	FAGPSRYLIQISLFITYYYGTCSVYAVIVAANFNKVISYYMTPTGEPLVEINPRI IIAILLLPLILLSWIPDLKYLAPVSMANVFMGTGLGITFYLVKSIENFDN VSYIAPISEFPNFFSITIFAMEAIGVVMPLNSMKTQHFVVICGVLNKGMS GVTMIYILLGFLGYAAFPGKAEGSITLNLPTTEEIPAQIVQILIGLAVYCTFGL QFYVCLDIAWQGLKDRFQKKPNLANYVLRTVLVTGSVLIAIAVPTIAPFIG LIGAFCSILGLLIPVFVETVITYWDIGFGRFHWVAMKNVIICVIGLMALVFG SSNAVKDILKEYAPKDAEDAISRNVNTNIAVNATAAVVNATV GALNTTVGN F
NvAAAP6 (NV16822)	MDLHTKNGTDTPGSLSQTISREISLKDVGARKDSGCGVFQSKDPIVQLDK DIEARTGGDDVHGSGSSHPTSYFETLMHHFKCNVSGIFALGD AFKNAGL VLAP TLMVFLGIICVHAQYILLKCNEEVRRRLGSSLEASPGYATTVELCFAT GPLAVRKYSVFMRKSVNLFCLITQLGFCCVYFVFISSNVKQVMGVWGV LDLHVHMAIMLVPILLSTWIRNLKLLVPLSSLANVLIVFGYVATIYVISHDL PAISERRYVADWSQLPLFFGTAIYAFEGIALVLPLKNEMIKPNFDRPLGVL NVGMIIVGCMFIAIGFLSYLRYGEEVAGSVTLNLPEKELLSQCICKLAISLSIL LTYALQFYVPIGIMWPEFVHQFGPFNYPVVGEILFRITTFCLITFILAEVIPQL GLFISLVGAVSSSALALIFPAIIEIVISWQDAKLNKFTFFKDIVILGIGFLGCF TTYASIAEIIHVFNKGE
NvAAAP7 (NV12580)	MGKKEEANEAPGEQMRDFSSTTKIAPVIGQYHEKDELYDPDHRDKKHT TSDVGSATHLIKSSLGTGILAMP SAIKNGLLVGGIGTHIIGILCSHCVHILVR SSHVLCRRTKTPQMTYAETAGAAFESGPLAVRKYAAFAKNLVN WALCATY VGGACVYIVFIADA IKVLGDEYSIDIPKRTYMLCLIPAVLLGQIRHLKIL VPFSVIANMSLTIGFSITLYYIFSDLKPLSEIHVYSTWAQMPKFFATVIFAIEG IGTVMPIENSMANPNHFIGCPGV LNISM TVVISLYTMMGVFGYLSFGDDA KGSITLNLPPGDILAQVVNIIALAVILTYGLQFFVPLEI IWN SIKHKF SHRW EVLGETVMRILMVLLTVSVAMLVPRLEPFISLVGAIFFSFLGIFIPAVVETVS CWECHLGT CNWRLWKNCF LALVAVCALISGTWISLLDIISLYTTPASGLVD SGNK TIVNAAVQTILSTTLGVINSTTTLSPVDLTTTVSPVDVITLLP
NvAAAP8 (NV10096)	MESSEPKNSMNEKS YILDNSRKPFEDEDEPENSGKFTSLPLASFNFINSIIGS GVIGIPYALHQAGFLGIALLVIVAILTDYSLILMVRSGHLCGEMSYQGLM RASFG RPFYILTALQFIYPIAMVSYNVVVGD TVTKVLIRVTGLDPDSFIV KREVVIFLATLLVVIPLCLYRNVAKLAKISFLSLVCVGFILLAI FIRMDSMSSI VPSHPDSWKFGNIAGIVPAVGIMAFAMCHHNTFLIYGSIERATQEKWDVV THWSLFTSFLIAAAFAGIAGYATFTGYVQGDLMENYCWDDDLMNFSRIMFS GTILLTFPIECFVTREVIMTAIRGTDEVENHDAYIAGSDRKYLIITMAIISVAY LISMSTDCLGIVLELNGILAAVPLAYVLPALCYLKLEEGSLLSQKLPALAL LVAGVFAAVSGLLLLIFNNTSAASCVHGQIMSYCQSPNSTDVTSTTFKPSST TASSILTSLLTSPASATTVTTTAATTAATSTLASTTTSTTTTLLPR
NvAAAP9 (NV18067)	MISHIMTLANGIIGVSVLAMPFCFKQCGIVLATLVLLSSILSRLACHFLIKS AVMCRRRNFEFLAFHAFGPMAKILVELCIIGFLLGT CIAFFVVVGD LGPQIV GEMINKNPGDIRTSFLITTGIFIVLPLGLLRNIDSLASVSTASIAFYICLVFKVI AESTHHIFAADWFDKVDYWRPAGILQCLPIFALALFCQTQLFEIYEAMPNA TLEKMNQVVKGALNICTTVYISVGGFFGYVAFCTQPFTGNILMSFEPNLTSEI IKIGFVLSVAFSFLVIFPCRASLNSLLFRRGYAHETTTSYITEARFRCLTTFI

	VIIALTIGVLPINIELVLGIVGSTIGVIIICLIFPAAFFISINTKNTNERLLAQILVF TGVWIMILGTYANLYAIEQSSNSRVTATTMKLPSQINNMPHSLINKDMLHR PDQPEQSDILIHNEVDAERLKPVPDKLPDDENVRQEPPVPERVPETEKL KIKQEPNIFETVTISPKEIVDKINMDNELIKETNRGYDSLKKTKETNEL PKKIEDNSIPVKDNDKTDGTGQKNDVIAVDAIKKEDSELAADKEMSNVDSV QRREQLEKTLKKHLIEQKEMLQEQKELLKDIEQQKELQLDKKPEIVKEN KKNEMIKENAEHHIGDELRVPIKANQVNVKADQVNEKLNNNQDTLQTKL EMLGDGANSPIKSKDILLEVENSCKNEGIQNNEIPNNEKPIKNEQLDNIN GPNNSNRNSSLVSNLNDGPDNVLIKKSEDPPIKALTRQSNKIANGNEVIDIPS DDRKINVNLNDKKVEDKVRDKNDKYSIPIVLKMNNQTKLVLDSEHSSINK SSPDVAGVGRDILEEHQREKRTISLETDTAKLNHETNSPDGKSNAMIEHSIV DKEICTKDETKSENSNLNVKTEPRKSTEEPENLIKTSAYLSEQNIVKRVL IDPDLNLGNNHVKLKKRDLKTLDFNEDSKK
NvAAAP10 (XP_016840 414.1)	MENKNGEVLNMQRVQNSCKANGLPDSGSLKPTAVSSSSLESPEYDPHQH RNRPHPTTNTETLIHLLKGS LGTGILAMPNAFCNSGLVTGTVATVIIGILCT YCLHILVKAQYELCKRLKVPILNYPQSMKVALEQGPPSLRKFHSSPIVD AFLIVYQLGICCVYIVFVATNIKQVADQYCEPIDVKLHMLILLIPLTVINYIR NLKLLAPFSSVANIITFVGLGMILAYVFDDLPSITEREMFGSVRNFSLYFGT TLFALEAVGVIALENMKTQPFRGTGVLNVGMLVIVVLYILVGGFYI KYGPDASGSITLNLPMDAVMAQSIKVMFAVAIFITYALQAYVPVEIHWTTYL DHRIKKNLFWYIVRTLVTLTCTCKCTVCTKYNRSKNLPLFSAESISGGF ESKRDSLQANSTHITAKGPPAKLTSSRPFRGR
NvAAAP11 (XP_008216 698.1)	MQKFECDTRNAQTGTDYDPEEHRPPEQLTTGTFAVFMHLIKAAGSGILF LPYAFRRTGYLAAILCSIFIGTISIHTAVITVQCCQILCKRSHVPSLNFAETA ASFKLGPEPFRKYAGAFALATNVIVCFVQYETAVVYSIYVASSFQQVFEYL SGWNHQDVRIYLLVFLPIFCALSLIPNFKYLVPFTIIGSICLLLGFTTLYYMI DQFPSPSRLEMYTDIEHLAIYCSVFLFAVHNMSMLMPLMENTMRHPRRMGL VLGVSMIVNVIVNVTFGLGYNKYQNACDVIKLNPLDELPAQMVKVAV SLSVLLTYGLQYYVPITILWPMIAKRIGNKRVYETFFRLGGVIACTSLAIAL PHLAQLLGLFAALSMTTVMLLIPAMIEITTKWNDPGRARHYLMLVKNVFI LFVWLMIMVFGTIENIRDILREYSGAEDPDAACG
NvAAAP12 (XP_001607 294.1)	MNYPSEEDNIIQNDIVLSTA AVENSTRESNPGRRQTAGTGS LGTIFLMVN ATLGAGLLNFPEAFDKSGGVATAIIAQLFFLVFITATLVILANCGDVTNTTT MQAAAFAGLCGPNLFFCGICVAIYSFGCCITFLIVIGDQFDRVFATLYGLDY CHTWYLARPFVTCSSALFILPLSFFKRLDALNYASSIGCVTILYVWLVIVY ESFDNYKLPKPMHIWPEEPLQVLQIVPIICFAYQSHMTAIPTYACMKDRQI GKFTLCAIISMIVCFAYSIVGGFYATFGIGKVPDILQGYTDKSTTLTIAIV AIAVKNFTTYPIVLYCGRDAILSLFGRDVDCQFSIRFTITIIWYALSIVAILV PDIGPVINIMGSLSAAFIVFPGICLLQSTLYKDPLLHLNKDRFLVFIAIFITA LGAFVCGVVFVEALQDLQTMSLDQPAKVTGFKAE LGSSLCQ
NvAAAP13 (XP_008209 128.1)	MDNRPKRSNGGKSRQPPPGFYRKTLAQQQRDSGSESAPLLSSGCSHASL DQPIIMFQDSETS DLSSTAGNSSRDGKEQCRSVIDRLVSTGGGINNYSIS NLLPKRLPPLVNERVPSLNASLHADIERDKCYEIRNADLLEDDPFDLME GRTEKGLLSDFFTQSLPMQGNIGDTEEIKPKQSSLVTIFSVWNTILGSSML

	<p>TMPWGIYMAGFVPAIILILAMSGLCLFTAYKLLQVHKYHGGGERIEVMEL SRAFLGSWAEHMAKIFSISVLMGANIAYWILMSNFFYNSVNFLYDIIAGIPV LPDTYNRTDGDLLCPKYELNGTANYDKSYDNLGPAWDLYKTVPIFLALLV FPVLNFNTTFFTKFNSLGTVAIVYLVVFLVKSGSWGIMDKTAWQESW VLRSTFPVLSGMLSLSFFIHNIIITIMQSNRNQKKNRDLTIAYILVTITYIIV GIVFYVCFPLAKVCIEDNLLNMFQKNDGLTVGARVVLLFQLFTVYPLITY MLRIQLLSSVFKTTKRRRFVLLVNLIIVTICVLFMMPHVGTIIRYTGAIISG LVYVFTLPSLLHLMISYRQGTMTVMQVMCHACVPIIGVNLISQLFIQAN</p>
<p>NvAAAP14 (XP_001601 210.1)</p>	<p>MREDIPLLLSRKDSGLSLLFATLCVVDIFGVFPIIALPRAIVQCGWLGIPLVF VVFQFIYASLLGKSWNIANVVDPSISRKNRYPLAAVTELTGRRASKW VAILDLTVFAGGVPNLLVASYNLQLFGLKVSQMQLNSFCYWLLVVGVL LCPVMWLGSPRDMKWVVTISVCAVSATAVLIWWSIVHDQEPMNYSVPVT SPSWDTFISGYGMLAFQFDVHPTIMTVQVDMKKPKDINKAVIFSMISGTL FAVTAGLAVWRYGGNTSTNILQVMPPGIMVQTAILISAVQLCLSSAIGHASL FQHLEDQLRVDSSFSWKRCATRSIVFLGVALGESVPRFDIVMSLIGGTLV GPLVFLPPLMYSKARALCSASLRRTSAPEYLCSGPERRAGLAARELFADP RVHSRSTHFGRYGDDEKNDGYYFTYYEDEDQVEVNPYTESVECFVND SGARKKQSDDELSRSGSLPVMADASRPSVRPPRRQEALQNPANRPRNF CTKQRIIDWFGYCVAFVTGILITVSSTYINIRNTIRYVQFIPPCIVNATANIPEL G</p>

Table S10. CDS sequences of the AAAP transporters of the *B. tabaci*.

Gene	CDS sequences
BtAAAP1	<p>ATGGAGATGAAATCTTCTGAAAGTGCCTCCAACGTGACTCAAGTCATGA CAAGAAGTCAACAGGAGAAAGTATTTCTCCCCGTCAGTTCAAACACGC AACATCAGATTTTCGAAACGTTTCTGCACATAGTAAAAAGTTCACTAGGCT CTGGCCTACTAGCGACACCGGATGCCTTCAAAAATGCAGGTATCGGCCTG GGATTGGTTGGTATGGCCGTAGCTGTTCTGGTGATCACTCATGCTACCTC AATTTTAGTTAGGAGTTCTCAAGCAATATGTTGCACGCTGCAAAAACAC ATTTAACGTATGCTGATACAGCAGAATATGCCTTTGAATATGGCAACATTC CTGCAGTCAGACCGTATGCCGGCTTTGCGAGGAAGTTTGTA AAAAGTGT CTCGGTAATTACGTATTACGGTGTAATAACAGTTTATGTAGTGTTAATAGC ATCATCCGCAAAACAGCTCATAGAGAACCATATAGAATGGTCTTTGAACA TCCGGTGGTATATTCTTCTAGTACTCGTGTGATACTACCATTGGGAATCAT TAAGCTCATGAAGTTCTTGGCGCCCTTCTCTGCCATAGCGAACGTATGTC TCTTCGTCGGTCTAGGAATCATTCTTCAAAATCATGGACGATCTCCAC CTCTTTCCGAGCGACCTTTTGTGCTCCCATCGAGAAAGTCCCTCTATTCT TTGCCACCATGTTATTTGGACTAGAGGGTATCGGAACTGTCTTACCAGTT GAAAATGAAATGAAAATCCCGATCATTTCTAGGATGGACCGGGGTGTT GAGCGTGTCCATGTTCTTCATCGGCCTCGTCAATGCCATCGTCGGGCTCT TCGGTACTGGAAGTACGGCGATGCTGTGTGCGGCAGCATCTCATTGAAC ATGGAGCAAGACTGGCTCTCTGAATTAGTCAAATTCCTTATCGCAGTGGC TATTTTGTTACATATGGCCTCCAGATGACGGTAACCTCTGAAGTTGTTTG GGATAGTGTACAGGATTATTTTCATAAGGACAATTCAAAGTAGCTTATTA TTGCGTAAGAGCGTCCCTAGTCGTTGGCACAGCTATTGTTGCTGCGATAA TACCAAATCTCGCCCCTATCATATCTCTGTTTGGTGGCATTGGTTTCTCGA TGTTGGGACTTTTCTGCCCGCTGTGATAGATTTTCGTGCTGTTTACGATG TTGAGAAAGGCCTAACGGACTGGCGCTGTTGGAAAAATATTCTGCTCATA ATTGCCGCTTTTTCGGCTACATTCCTCGGCGCTTACACGAGTTTGGCCGAT ATCATTTC AATTATAGTTGA</p>
BtAAAP2	<p>ATGTCCGAGCTAGACGTAATTCAGTTTTTCGTTTTTCCAGGAGCCAAGCAC AGGCGAGCCGCAGGCCACTGAGCTCGACACCTTCCTTCCCCAAGATGGA TCTAACAAAGATGGATCATCAGCAAAGTACAAAGTGCAAGTGCTGCCAA CGCGGCCGCGGGACGCGGAGGCCCGCCGAGGGACCGGGCACCACGAG AAGGGCTACTGGGACCCGTTCAAGGAGCGGAAGCTAGACCACGCCACC ACCGATGGCGAGACGCTCACCCATCTCCTCAAGGCCTCCCTCGGCACCG GGATCCTGGCCATGCCGGCCGCTTCAAGAACGCAGGGATGATCACCGG CATCTTCGCCACCATCATCGTCTCTCTCGTCTGCACCCATTGCTCATACTG CCTGGTAAAATGTGCACACTCGCTGTATCATAGGAAGAAAGTGACTACA ATGACCTTTGCAGATGTGGGAGAGGTTGCTTTTGCGAACGGACCTCCAT GGGGCCGGAATTCTCCAAATGGGCTAGATTCTCCATTCTTTCGGTCTAT TCTTAGCGTACTTCGGAACATGCAGTGTCTACACTGTTATCATAGCCAAA AATTTCAAGATTGTGATAGAGCATCATTCTCACTACAATGCAGACATACG GTTTTACATAGCGGTTCTGCTTGTCCCTCTCATTCTGCTCAGTTGGATCCC</p>

	<p>TAATCTGAAGTACTTAGCGCCGATTTCTATGCTGGCCAACCTTCCTCATGGC CGGTGGTCTGGGCATAACTTTCTGGTATCTTGTTTGGGACTTGCCAAGTG TCTGGGAGCGCCCCAGTTTGCCTCCTGGGAGACCCTGCCTGATTTCTTC AGTACGACTATCTTTGCCATCGAAGCCATTGGTGTGATAATGCCTTTGGA AAACGCCATGGAACTCCTCAACACTTCGTTGGCATTGTGGTGTTCTTA ACCGAGGGATGAGTGGAGTTACGATGATTACATCTTACTAGGTTTCCTT GGTTTTCTCAAGTTTGGAGACGCTGCTCAAGACAACATCACAAATAACT TGGATATCACACAAATAGCTCCTCAAGTTGCCAATATCTTCGTAGCAATTG CTGTTTTCTGCACATTTGGTCTTCAATTCTTCGTATGCCTAGAAATTGGCT GGGATTCTGTCAAGGGCTACTTCCGAAGAGACAAAGATTCTACAATTAT ATCGTCAGAACTGTGCTTGTTTCAGGAGCTGTGTTCTTGGCTATTGCAGT GCCAACAATAGGCCATTCATCAATCTAATCGGAGCCCTCTGTTTCTCACT CCTGGGGCTCATAATTCCTGTTTTCAATTGAATTCGTGACGTATTGGGACGT TGGATTTGGCTCCTTCAATTGGATAGTGTGGAAGAATATCCTAGTCCTCAT TTTTGGAGTTTTAGCCCTAGTCTTTGGCTCGGCCACTAGTATCAAAGGGA TTGCGGCACTGTATGCCCCGCAAGGTCCTGTGGCTGATGGATTCAACAA GACTTTAGAAAACCTATCAAGTTACAACACAACAAGTGTTTGA</p>
BtAAAP3	<p>ATGAGTGATAACACTCCTCTGCGCATTTTGAAAACCAACTGGGCATAAA ATTGAAGAAAATGAAACCGGAAGAACGGCAACCTCTCATTGGGGTGGCC TACCCCATCCCATCAGTGAAAATTTGATGATCGAGCCATGCCGAGGCC AGATATCAGAGATTCACCAGAAAACCTGAGCGTGAATATTGACGGTGGA CCAATGAACGATCAGTTTGTCAATGCAACGAAAGAGGAGGAAGTTAAGA ATGATTTTCAATCGGCAAGGGATTTAGCTCATCCTACTTCGAATTTGGATA CGCTCATACATTTACTGAAAGGTAACATTGGGACTGGCATCCTTGCAATG GCTGATGCATTCAGAAATGCTGGTCTTTACCTTGGGCTAGTGTGTACCCT TTGTCTGGGAGCAATCTGTACACATTGCATGCATATGTTGATTGGATGTGA AAAAGAGCTATGTGAACGAACCAGCGTTCCTGCCCTGGACTTTGCGGAA GTTGCAGAGACAGCTTTTGCGACAGGTCCTGAAAGGTTACGGAAATTTT CAACTGTGTTTAGAATGCTTGTAATACATTTTAAATCATAACTCAGATTG GGTTTTGCTGTGCCTACTTCGTTTTTGTCTCGCAGAACTTGCATGATGAA ATAAAATATTTCTTCTTCGATATCGAGCTTATCTGGGTGCTGATACTTATGC TCGTTCCAATGATCTTATTGAATTGGATAAAATCACTTAAGTATATGATGCC GATTTCCCTTCTGGCATCCATCCTGACAACCTCAGGCTGGGCATCATTTT CTACTACGTGCTGCAAGATTTGCCAACACAAATACAGTTCCCAAGGTTG CGTCTTGGGGTCAGTTACCTCTATATTTGGCACTGCTGTTTATGCCTTTG AAGGCATCGGTGTTATCTTGCCTTTAGAGAATAGTATGAAGAGTCCAGAA CATATGAGAGGTTACGTTGGTATTCTCAACACTGGAATGGTAATTGTGAC CTGCCCTACACAGCAGTTGGATTCTTCGGCTACCTCAAATATGGTGATG CGGCGACTCGAGGCTCTATTACCTTCTACATGGGTGCTGAACTATTTGCTT CTCACGTTGTGAGATTAACCATGGCTCTGGCAATTTTCTCTCGTACTGTC TTCAGTTTTATGTTCTGCAAATATCATTTGGCCTCAATTAGTGTCAAGGT TTGCATTCCTCCAACCAGAAGAACGCCAGTATTTGGAGAGTACATTTTC CGTACTTTGCTGGTTCTTTACATTTTTGTTGGCTGTAATCATTTCCCGATC TAAGCGCAGTTATTTCTTGGTTCGGTGCTGTGAGTAGTTCTACGCTAGCC</p>

	<p>CTTATTTTTCCACCACTATTAGAGATGGTAACATTTTACGAGAAAGACTTC AGCTACCGGACGCTCATCAAGGATCTGTTAATAATGCTTTTTGGCATATGT GGATTCCTTGTAGGGTCTTACACTTCCATATTGAACATTCTCAATCCCCCG GAAAACCTCTTTAG</p>
BtAAAP4	<p>ATGCCTGGCCCTGGCGGCGAGCTAAAAATGCACAACATAAGCCAAAATT CTCCGGAGGGAGGAAACGGGCACAAAGTACAACGAATTTTCAATAAACGT TCCACCTCATGAGTCACCCCGGATGGAGATTATGATCCGCACACACATC GAGTTTTAGACGCACCCACAACACTAACAACGAGACGCTAATCACTTGCT GAAAGGAAGTCTTGGAACGGGAATTCTTGCCATGCCAAAGGCGTTCTAC CAAGCAGGTCTCCTCATTGGAACAATTGGCACAATCCTCATAGGATTTTT ATGTACATATTGTCTTCACGTTCTCGTTCGTTCCCAGTACATCCTGTGTAA ACGGAAACGAGTTCCAATCCTTAGTTATCCTGACTCAATGAAAATTGCCT TGCAAGAGGGTCCCTCGGGATTGAGGATGTTTGCTGACGCTTCATATGTC ATAGTCGATGGGTTCCCTCATTGTATATCAACTTGGAAATTTGCTGCGTTTAC ATCGTTTTCGTTGCAACTACCGTAAAGCAGGTCGCTGACGAGTTAGCTGA CCCGATCGATCTACGCGTGCACATGCTCATCCTGCTCCTCCCTCTGATCCT CATCAATTACGTTCCTAATTTGAAAATGTTAGCGCCTTTCTCGCAAGTGGC CAACTTCATAACTTTTGCCGGATTGGCGATAACGTTGTACTACATCCTCCA AGATCTGCCACCGGTGTCGTCGCGGCCGTTAGTCGGTGAGCCCCGAAAC TACTCTTTTTGTGCGGGACTACGCTTTTCGCTCTCGAAGCTGTTGGAGT GATGCTAGCATTGGAAAATAACATGAAGACCCCTGCGTCTTCGGTGGCT ATGGAGGTGTACTIONAATAAGGAATGGTCATCATCGTGTTCCTGTATGTG GCTATGGGTTTCCCTGGATACGTCAAGTATGGAGAGCTCATTGCCGGAAG TGTCACTTTGAATCTGCCCAAGGAATGCTTGCACAATCTGTGAAATTGA TTTTTGCAGTGGCCATATTTATAACATACGCCCTTCAAGCATATGTTCCGG TCGACATCATCTGGAGAACATACATGAAGCAGTATCATAGCCATAAAAAT AAAATGTTGATCGAGTACATTCTCAGGACGGCAGTTGTACTCATAACATT CGTGCTAGCCGTGCTGATCCCGCGGCTGGAGCTGTTTCATCTCCCTGTTCCG GGGCGCTGTGCCTGTCGGCGCTGGGCATTGCGTTCCCGGCCATCATCGA GCTGTGCGTCCTGTGGCCAGACCAATTGGGCACTCTCAACTACGTCCTCT GGCGGGACGTCTTCTCGTCGTCATCGGGATCCTTGCCCTCGTCATCGGC ACATCCATCAGTGTTAACGATATCATCGTGTCTTCCAATGA</p>
BtAAAP5	<p>ATGCATAGTAATTCAGTCATAACGCTGTCCAACAGCATCATTGGTGTGAG CATACTTGCTATGCCATTTTGCTTCCAACAGTGTGGGATCATTTTGTCCCT CATCATTTTATTTTTCATCAGTATCATATCACGACTTGCTTGTCAATTTCTC CTGAAATCAGCAGTAATTTCAAGATGTAGAAGTTTCAATTTCTGGCTTT CCACATGTTTGGACCAGCTGGTAAAACAGTGATCGAATTAAGCATTGTGG GTTTTTTGATGGGATCTTGTGTCGCATTTTTTGTGGTTGTCGGCGATTAG GTCCTGCAATAGTCAAAAGTGTGTTTGAACCTGGAAATGTCTGTTCAAGCT CTCCGTCCAGCTCTATTAATTGGTGTAGCAGTTTTTCAATTTTGGCACTG GGACTGGTCAGAGACATTGACAGTTTGAAGTTCTATCTGCACTCTTTCCAT AGGTTTCTACATAATATTAGTTTTGAAGATAATAGCAGAGGCAACTCCACC TATTTTTGACTCTTCTTGGGCGGACAAAGTAAACTACTGGCGACCAGCTG GAATTCTCAATGTCTGCCAATTTTCTCCTCAGCTCTCTCATGTCAAACGC</p>

AACTTTTTGAAATTTTCGGAAGTTATTTGAATGGGCCATTAGACAAAATA
AACGGTGAATAAAATCATCAGTCAACATGTGTACAGCAGTATACATGGG
TGTCGGACTTTTTGGATATATTGCCTTCTGTAGTCAACCTCTTACTGGTAA
TGCCTTGATGAATTTTCCTCCATCTGTAAGTGGAGATATCATCAAATTAGG
ATTTGTTGTCTCTGTAGCTCTCAGTTTTCCGCTTGTCATATTCCCATGCAG
AGCCAGTCTTTACTCATTFTTTGTATCATCAGAATCATTCCCTCTCACTATGA
ACTTTTAACTCGAAATACTGGTGGTTCGAGTCAAATGTCCTGACGCTAT
TGATTGTAACGGTTTCACTGATCCTTGCTTTACTGGTTCCAAGTATTGAGC
TAGTTCTTGGACTTCTGGGATCCACCATCGGTGTAATTCTCTGTTACATTT
TACCTTCAGTGTCTTTACTAGACTGTTGAAGAAAAACACTAATGAAAGG
CTTTTAGCCCAGGTTGTGATTATTGTTGGGGTTTTTATTATGGTGTGGGA
ACTTACACCAACTTATTTGCAGCAGAAAAAGCTATTTCTGGTCCAGAGAA
AGATATGCAGCTTAATATTGCTATTTCTCCTGAAAAAGAATTTCCATCGGA
GATTAAACATGGTTTGGAAGAAATGAGAGAACACAGTATGGAAGCATTT
CATAATGTGCCGGAGAAGTTACACCTTGACCAGGCAAACCTTGGACTTGA
AAGAAAATGCTGACCAGGTGAAGGAAAGTGATGATAAAAAAATCAAG
TCAGTTTGGTTGATAGCAACAAAGACTTGGACCAAAGCCAAGGTGATGC
CAAGAAGGAGCCAGTGAAAATAAGTCAGAGAACCTCATGAAAGCAAC
ACGGAAAGAACCACCAGAACCTGTTGAGCCTGTTGAGACAAAACATTTT
GACAATCCCCAAAAAATTGAAGTTGATGCAAATTTGAAGCCCGACTTAC
CTGAAAATATGAACCAAGCAAAGTCTGAGGCAGTAAAAAAGAATCAT
TGTAGATCAACCAAAAATAGTGGCTGATGAATCTCTTAGACAAGAGAAG
CCTGCCGAAAAGCAGGTAGAATCTCCTAATGAAATCAATGTTCCAAAA
AGGATAAGGAAAAAATATACATCCCAAAAGGAGGGAAGATTTTCAAGAA
GCTTCATGAAATCCCCCAAAGAATCCTCCTTCAAAGAAAGATAGTGTTG
TCAACAATGTGAACCTAGAAGGAAATCTACGACCAGAAATTATGGATAA
ATTAAGATACTCCTCCATTGCCGATCGCTCTTCAGAAAAATATCAATGT
TTTCAATGTCTCTCATAACCAGAAAAACACCAGAGAATGACGATAAG
GTCAAGAATAGAGAGCTGTTGGATCATCAAAACAAAATGAGCCTCACC
CTCGAGAGCGGAGAGATGTGCTGACTCTGGCTGAAGAAGAGTTATCCAA
TGGTAAAGGAATAAGTGTCAAAGGCATTCATGAAAATGAGGGCTCTGAA
ACTGTAAAATTAGTCACAAGGAGCTTAGGTTCTGTTGACACAGATGTGAT
TGAAAACCTCAGAGAAAGTTGTGTTAATACTCTCTGAGGTAGGGGACAAG
GATCTAAAAATGAAGAATAATGGAGAGAATGAGACCTCAGACAAGTCGC
ATTCCAGTCTGTCAGCTTCGAAGGCAGATTTTATTCTGGACGTTGAAGAG
GAATATCAGTCTGCTAGAAAGTTAAGCCCCGATTTTGGCAATCAAAGTC
TGCCAAGTTTACCGCTAAGCCAGAACAATCTCGGAAATAAATTAATTG
ATGAATCAACTCAAACTTAGATTTTAGCCCAGATATCCAAAATCTGAC
CAGTTTGCTATAAAGTCAGATTTTAATTTTGATAATCAAAGTCTGGTGG
TCTTCTGTTAAGTCAGTTGTTGAGCCAGGTTCTCAAAAATATGACGCCTC
TATCCCAAAAACAGATTTAAACATAAGCTTCCATCAAAGCGATGAATCCG
CTCCAAAGTCAGATTTAAATTTTGACAATCACAAGGTATGCCTGAAGTG
AAAACCTCAAATCCATTCCAAGTTCTGATTCTAATTTGGTGAACCTACA
GAGTCTCCGGAACCTCAAATCACAACCTCTGCTCCAAGTTCAGACTCC

	<p>AATCTAGGCAATGAAAGGAATAATTCTGCTTCCAAGTTAAAATCAATGTC TGACAATGCATCAGGAGATATCACACTGAAAGAACTTTGAGAAGTGTG AATTCAGTCGAAATGAAAGGAGTGGATTTCATGTCCAAAAAATCAAGTG CTAAAAAATCTATTCAACCAAATAGAACGTCAAACCTCAAGCAAGAGTAA TTCATCAGATAAACTCTTGAATATTCAAGCTCCAGATAGGCTGTCAAGTC CTGATAACATATTTAATGATATTGAATCAGTGAACGTTGAAATTAGCAACG CTTTTCACGATGTTCCAAAATCATTCAAGCGTGACTTAAAATCTGTGAG CTTGTGGCTGAAAATGACGAGCAAATACTTGATAACATTCTTAGTGTAAG GAAAGAAATAGATTCTATTAGTAAAACAATTGAAATTTAAAATGACAGGT AG</p>
BtAAAP6	<p>ATGGGTAACGAAAAAATGGAGAAGGGGGAGTACCTAGAAAAAACCCAA TCAATGGTTACCATTGATGGAAGTTTTAACACCTCCTCTACACTGAAATT GACTGATAATGGAACGAAAAAAGGCATCGAGGCCGACGACACGTACGA GCCTTTTTTCGAATCGAGATATGACGCATGCCACATCGAATTCGGGTGCCT TCTTTCACTTGCTCAAAGTAGTTTAGGGTCTGGCATTGCGGATGCCG AACGCTTTCAAAAATGGCGGTCTCATATTTGGAATTGTCCGAAACGATACT CACGGGAATTATTTGTACATACTGCGTACACATGCTGGTCATATGTTTCGA AATTTTATCAGCCCGTGTGAAGAAACCTACGCTAGGCTTCGCAGAAACG GCAGAGGTCGCTTTTCAAACGGGACCAACCAAGTATAAAACAATGGGCTG GTTTTGCAAGAGAGTTCGTGTATGGAGCTCTATTTGCAACGTATTATTTTG GAAATACGGTATACGTAGTGCTTATCGCAACATCGTTTAAACAGGTGATG GACAGCAATTTGGGACTAGACTGGGACATTCGGATTTACATCCTCTTCTCCT GGCCCTTCCACTGGTTCCCGTGGGAATCATCAGGACTCTGAAATACCTCG TGCCTTTTTCCGCGATGGCTACAGTTTTTCATCATGGTTCGGGTTAGGGTTCA CGATCGCCTACACGCTAGAGGATCTACCCCGGTCACAAGCAGGCATTAT TTCACATCGTGGCACCAGCTGCCTCTGTTTTTCTCGACCGTGCTTTTTGC CATGGAGGGCATCGGAACGGTGTATCCCATCGAGAATTCGATGAAAAAC CCCGGACACTTCTTGGGCTGCCCGGAGTCCTGAACATCGCCATGATCAT CGTCGTAAATCTGTATGGATGTGTTGGCTTCTTCGGATATTTGAAATACGG AGATGAAACGAAAGGCAGCGTCACTCTCAATCTACCTGCAACAGCATTAA GCTGAGAGCATAAAAATCCTCGTCGCTCTGTGCGATTCTTTTCACGTACGG ACTTCAGTTCACCGTGCCGACCGAAATCGTGTGGAAAAGGATCAGCCAT AAATTTTCGGAAGAAAATCAAGAAAAAGGGTACTATATCATGAGAGCGT TCATGATTCTGGGCACAGTGGTGGTAGCGGCGGCGATCCCGAACCTGTC GCCGGCGATCTCCCTCGTGGGCGCCATTTGCTTTTTCGACGCTGGGCCTCT TCTGTCCGGCGATAATCGAGACGATCACCTTCTGGGACGATGACGTCCGC ACGCCGGGCATCCCGTGGAGGTGGATCAAAAATATGGTCCTCGTCGTCG TCTCCATATTCGCTCTCGTTTTCGGGCACCTACGCCAGCATCATAGAAATGA GTCACGAGTACTCGTAA</p>
BtAAAP7	<p>ATGGAGCGGTTGAAGGATTCCGTACAGCCGGATTACCAGGCGACCAGTC CTCGAACTCCCCTCCGCATCAATGAGCCATCGAACGACAGTGCATCTCCT TCCACTAATGCAAATGCAAGAAGTCCTAATTTTGAACTGGAGCTCCTCA GAATGCCGGAATCAATGTTCTCACCGCAGCCGTCTTTGTGGCAGGAGAG ATGGCAGGAAGTGGTGTACTTGCATTACCCAAAGCTGTCGTAGATTCCGG</p>

	<p>TTGGATAGGAATTTTCATCGTGATCATCTGCTGCATCAATGCAGGGTACGG CGGTTCTCGTCTTGGAGAGTGCTGGGCAATACTGGAGGAGCGGTACCCT GAGTACAGGGGGAACACACGCAACCCGTATGCCACTATTGCAGAAAGGG CTGTTCGAAAGTGGGGCAGTTACTTAGTCTCTGTGTGTATGCAGATCACG CTATTTGGTGCCAGTATCGTGTATCTCTTGCTGGCAGCGCAGTTGGTTCA AGATCTCCTCATTGTGGTGTTCCCGTCCGGTTGGTTTCTGCTGGTGGTTTCT CATCTTTGCTGTGGGGCTAATACCGGCCATGTGGCTGGGTTACCCAAGG ACTTTTGGTTAGTGGGAGTTGGAGCACTGCTTTCGACGACTGTGGCTGTT GTTTTCATAGCCACGCAGATGTTGATCGACGGTCTGAACCTGGAAAAGC TTCCACGACACAGGCCACATTCGTTCAAGGAGTTTTTCCTTGC GTTCCGGC ACTATCCTCTTTGCTTTCGGCGGGGCCTCCACGTTTCCCACCATCCAGAA CGATATGGTTCATCGTGAGAAGTTCTCAAAGTCGGTGATGATTGCTTTCA TAGCTATCACCGGTCTGTACAGCCCTCTGGTGATCGGAGGCTATTATATTT ACGGCGATAGTATTCAACCAAATGTAGTCATGTCGCTGAGTCATACAACT CTCGTTTCCTTAGCGAATATTGCCATGGCAATTCATCTGATCCTAGCGTTT TTAATTATCATCAATCCTGTTTGCCAGGATCTAGAAGAAATGCTCCAAGTT CCTCCCGAGTTCTGTCTAAAGCGTTGCATCGTGCGCACGTGCATGATAAT GCTCATGATAATCGTGGGGGCGACTGTTCCCGGTTTTTCGAAAATCCTCT CGCTAGTCGGAGGCTCGACCATCACCTTACAACTTTCGTTCTGCCAAAC TATTTCTACCTGAAGCTCAGCGACCAAAGGGCACCGAACTGGCCAGTTA GAGAGGTGCCGTTACACATGCGTGTGTACATGTACGAACTGATCGGAATT GGTCTGGTCGGTGGTTGCTGCTCGACATACAGTGCCTCATTGACATGGT CGGACCAGACTCCTTCACCAAGCCTTGCTATTGGCCCAACTGA</p>
BtAAAP8	<p>ATGGGTGAAATAAAAAAGCCAGCCAATGAAAAAACCTACATATTAGAGC AACAGTTTCAGTCTCCTGTTAGTGATGGTCCAATAGTGATACAGAGCAG CTTTTTTCGGAATGAAAAAGATCCGCACAAGTCTGGATTGGAGGTTGCCA GTTTCAATTATGTCAACTCCATCATCGGTAGCGGAGTTATCGGCATACCTT ATGCATTTAAAGAAGCTGGATTGGATTGGGGATCATGATGTTGGCGTTC GTAGCCTTAGTGACTGATTATTCTCTTGTTGATGGTCCGATCAGCTCAT ATAAGTGGTGTTTATTCCTATCAAGGACTAATGGAAGCTGCATTTGGGTCT GCAGGGTTCATCATACTTTCATTTCTTCAATTTATTTATCCATTTATAGCGA TGGTGAGTTATAACATAGTGGTTGGAGATACAATTACCAAAGTTTTAATG AGGGTATTCAATTTATACCCTCACTCTTACTTGCCCGGCGGGATGTAGTT GTAGCTCTTGCAACAATATTTGTGACATTACCCCTCTGTTTGATGAAGAAT TTAGCAGGCCTGGCAAAGCCTCCATCCTCTCAATGGTTTTTGTCTTTTTT ATTCTGCTGGCGATTTTTATCCGATTCTTCACTCTCCAAGATGTAGTACCA CCAAGTTTTGATGCCTGGGAATTTGCGAACTGGGATGTTATTCCTGCTCT TGGAATCATGGCTTTTGCTTTATGTGCCATCACAACTATTCTTTTGTAT GAATCCATTGAAAGAGCTGATCAAACAAAGTGGGACAAGATAACGCACT TTTCGCTCTCTGTTTCTTTTGCTATATCAGCAATGTTTGGTGTGGCAGGCT ATGCCACTTTCAGTGGATACTCCCAAGGAGATCTGTTGGAAAATTATTGT TGGGACGACGACCTGATGAACCTTGCTAGACTGTTTTTCAGCTGCACCAT TTTATTTACTTACCCAATTGAATGCCTTG TGACAAGGTCTGT CATATATCA AATAATGGGGAATGAAAATAACGTGTCTGATCTCCAACACTTGCTAATCA</p>

	<p>CATGTGGGATTGTTGGGACTACATTTTTACTGTCCATAATGACGGATTGTT TAGGAGTTGTTTTAGAACTAAACGGTGTGCTTTCAGCCGTACCCTTGCCA TTATTTTGCCTGCAGCTAGTTACCTGAAATTGGAGCCAGGGTCTGTGTT CTCCGATAGAAAACCTGCCCGCATTAGGTCTTGGCATAATTTGGATGCCTTGT AGCTGTAATTGGTGTGTATTGATTATTTTGGATTTTGAAGATAAC GTGCAGTCATGGAAGAGTCATGCCGTAAGTGTCTCAACCACACTTTGTACA CTTAA</p>
BtAAAP9	<p>ATGACAGACGGATTTGACGATCACCCATCGAACAGGCCACGGCGAAAGT CTTTGGACTCTGACAGTGAATCTCAGCCTCTTTTAAAGCTCCGACCACAGC TGTACCAGTTTATATGATCCAACAACCACTGGCGTGTTTCGGTACGATTCC GAGAGCGAGTGGGACAACGAAGCAAACAACAAGATGTACAAAGTAAG AAAGAAACAACAGTTTGGGCGCATTGAGTCCATCAGTTTACAACATA AAAAGCCCGATGTTCCAGTATTCAACCGAAAAGCATTTCCTACACACCA GCGCCAGATACGCTGAGTTTTGGCGATCCGAGCCGGTGACAACGTGCT TCTCGCCTCCTGTGATCAGCCAATCCATGCATAAGGTGGCAACCCAAAGC AGTATTGTAACAATTTTTTCAATATGGAACACGATGATGGGTACATCCCTG CTGGCGATGCCATGGGAGTCGGCCGAGCTGGAATACTCATGAGCGTATT TCTTTTCTTCATGATGGGTATGATTGTCTATACACCGCGCAAAGATGAT CCAAGTGCAAAAAAAGTACGGCGACAAGCATGTCGGTGAAATGGCCGA ATTATGTCGTGTCTTGCTAGGTTCGGCCGGTGAGATCATAGCCAAAGTGT CGTCAATAATCGTCCTTCTTGGAGCTAATATTATTATTACGTCCTGATGTC CAACTTCTTGTATTATTCAGTGACATTCATTTACCATTTTGGGGATGGAAT TATAGTCAGTCCGAACCTCTACATTATCTGGAGTGGAGGCATGTCCTAGAA ATGTGACAGTGCCAGTGGTTCGAATATCAACGGGTGCCTGGTTCGACGTT CGATCAGTTGTGGCAGCTGAACAACACAGTGCCCTTATTTTTGGCTTTAA TCCTGGGACCACTCTTAAATTTAAGAGCGTGACGTTCTTCACCAAATTC AATTCTTTCGGCACTCTTTCGGCCATGTATCTCGTGCTCTTCGTTTTAGTG AAGTCGATCTTTTGGGACTCCATGTTGACTTCGACCACGAAGATAGCCC TTATTTTTCTCCACTGGTATCCAGCAACCTCGCGGCCACTTCCGGCATGTT ACCTCTATCATTCTTCATTCAATTGTGATAACTTTGATGAGGCACAA CAAGGATCAGACGAAGAATGACCGAGACTTGTCTATCGCATATGGCCTCG TTGGATTAACCTACTGCCTGGTTGGAGTATTATTTATCTCTGCTTCCGTT GGCGAAAAGTTGTATTGATGACAATTTGCTGAACAATTTCAAACCCGG GACTTGATGACAGTAATAGCAAGAGGATTTATTTTCTCCAACTTTTGAC GGTGTTCCTACTCATAATGTATATGCTTCGGATACAAATATTTGCAGCGAT GCAGCTGAACCATTACCCTAGTTTATTCATGTTATCCTGCTGAATATCAC CATCGTTGGAATATGTGTTTCATTTGCCGTTTTCTTCCGAAAATTGGTGC TCTTTTGGAGTTCACTGGTGCTTGGGTGGCTTCATCTGCGTCTTTACAC TCCCCTGTTTGTGTACATAGCCTCAGAGATTAAGGAGGATAGGTAACT TGGCAGACGGTCGTGGTTCATTCGATAATCCCTCTCACTGGGTTCATCAA TTTTGTGGCGCAGTTCTTCGTAAATGATTAA</p>
BtAAAP10	<p>ATGGATACTCAATTGGCAACGATACAAACCACCCTGGAAATAAAAACCTG CAGAAAGCAATTCTTGTGCCGATCTTGTGCCGAGAAAAGAGGAACAACA AGAGAAAAATCCAAATACTCGAGAATTTAAACATGCAACAACAGATTTT</p>

	<p>GAAACGTTCTTGCATATTATAAAGGCTTCTCTGGGGTCCGGGCTGCTAGC AACACCAGATGCCTTTAAAAATGCAGGAATCGCCTTGGGTCTTATCGGCA CGGCAATGGCTGTCGCGGCCATCACTCATACCACCGCAATGCTTGTGAGG AACTCTCAAACATTGTGTTACATGTTAAAAAAGCCATTTCTGACATATTT GAAACAGCCGAGTATGCATTTGAATATGGAAACCTACCCGCTGCCAAAG GTCATGGTGGTCTTGCCAGGAGATTTGTAAAGCTGTTTTCTTTAATCACCT ACTATGGTGTAAACACAATTTATATGGTCTTAATCGCATCAACAATCAAGC AGCTCGTCGAGACTCGGATAGACTCAATGGAACATTCGATGGTACATT TTGTTGGCTCTCATCATAATTCTTCCTGTTGGAGTTATCAAACCTCATGAAA TTCTTGGCCCCTTTCTCAGCCTTCGCTAACGTTTGCCTTTTTGGTGGTCTC GGGATTATTCTCTGTAGAATCCTGAGGGATTTACCCCTGTCTCCTCTAGG CCTTTGGTGGCTCCCATTGAGAAAATCCCTTTATTCAATTCGACAATACTT TTGGTTGTGAGGGCATTGGAATTGTGTTGCCGGCCGAAAATGAGATGA AAAACCCCGATCATTTCCTGGGGTGGACCGGGGTCTTAAGCTGGTCGAT GTTCTGCATCGGGATTTCAAACGCCATTGTCGGGTCTTCGGGTACCTTA AATTCGGTGACGAGGTACAAGGTAGCATCTCCTTAAACATGCAAGACGA TTGGATCTCAGAATTAGTAAAATACTCATTGCGCTGGCAATCCTCTTCTC TTATGGGCTTCAAATGACAGTAACCTCCGAGGTTGTGTGGGACAGCGTG AAGGATCGATTCACAAGGACAACCTCGAAAAAGGCCTACTATTGTGTCA GAAGCTCTCTAGTTGTTGGAACAGCCGTTGTTGCAGCTGTGATACCCAAC CTGGCACCAATCATATCGCTGTTTGGAGCAGTTGGTTTTTCAATGATGGG ACTTTTCTGCCCTGCTGTTATAGATCTAGTGCTTTACTATGATCCAGAAAG AGGTTGGACCGACTGGCGTTGCTTAAAAAATATTCTCCTCATGTTAGCTG CTTTAGCTGCGACTTTGCTCGGCACATATTCAAGTATGGTTGACATCATT CCAACCTACGAATGA</p>
BtAAAP11	<p>ATGAGTGACGGCGGCGTTCGGTGTGCGCGGATTGGGCTTCTGATTCGCCATC CGCGCGCTCAACGAGTCGGCCCGGCCGGTCTGCCCTTGTCTCCCCGAG ATCCAGATCGAGAGAGTGTGCGCCCTTCGCCCTTCATCGTGGACCTGTCAC GCTCGCCACGCACAACATGCGGCTCACGCTCGAGGGAAAAAATGTGCG GCCAATCATTACAGAATTTGACCCAAAGAAAAGCGGAGTCCGGACGGAA AGGGCGGATCTCGTCATGGTCAAGTACAAATGCCAGTCAAATGGGGTGC CTATCACGATGACAACAGGATCGACGCTCCCTCTAGTATCGAGTACGAAC AAGGATGCCGAATCGGGAGGCTACAACCCCTTCGAGCATCGGAAAGTGC CCCATCCGACTTCGGACATGGAGACATTCATTACCTGTTGAAAGGTAGT TTAGGCACTGGCATCCTTGCCATGCCGCTAGCTTTTTCAAATGCTGGACT ATGGTTCGGTTTTGGCCGCCACGTTTACTATTGGTTTAAATCTGCACATACTG TGTTACATTCTAGTAAAATCCTCGCATATATTGTGTAGGAGAATGAAAGT TCCGTCCTTGAGTTTTGCGGATATTGCTGAAGTTGCTTTCCTAGCAGGAC CTACTTCTGTTCAAGGTTTTGCTGCCTTCTCTAGGTCTATGGTTAATTTGT TCCTCGTAATTGATTTGCTTGGTTGCTGTTGTGTCTATTTGGTTTTTGTGCG TAAAAATATCAAGCAGGTTGTTGATGTATACGCAGGGGCAGAGTTTGATG TACGATGGTACATCCTGTCCATTCTGCCTCTATTGATTGCAATCAACTGA TCCGGAACCTGAAATATTTAGCCCCGTTTTCCATGATTTCAAACCTGCTG GTTGGAATTGGGATAACGATTACTTTCTACTACATGTTCAAGGACTTACCT</p>

	<p>TCGTTGGACTCGGTTCCACACCAGCACTTCTCATCCTTTGAGCAGCTTCC GCTCTTTTTTGGCACAGCTATTTTTGCCTTGGAAGGAATCGGTGTTGTGA TGCCATTGGAGAATAACATGAAAAAGCCACAGCATTGTGATCGGATGTCCA GGAGTGTGAAACACAGGCATGTTTTTGGTCATCAGTTTGTATTCTGGAGT CGGATTCTTTGGATACTTGAAGTATGGCAGTAAAACGGAACCGAGCATCA CGTTGAACCTGCCTCAACATGAGCTGTTAGGGCAAAGTGTAAACTTAT GATGGCTGTTGCTATTTTCTTGACGTACGCTCTGCAGTTCTACGTACCATT CGAAATCATCTGGAAATCAGTAAAACATCGATTACCTCCAAGCCAAAG ACTGCCGAATACAGCTTGCCTGTAGGACTGGTGGTCGGAACAGTTGTTT TGGCTATAACTTTCCAGAAGTGGGTCTTTCATCTCTTTGGTGGGTGCAT TGTGTTTATCGACGCTTGGACTCATGTTCCCTGCAATCATTGAACTGGTAA TCTACTGGGAAGAACCTGGAATGGGCGCCTACAAGTGGAGGCTATACAA GAACCTCGCCATTATCGCTTTTGGACTTCTTGGCCTGGTAACAGGGACAT ACACGAGTCTCTGGGAAATGGGAATGGGTAATGCCATTAA</p>
BtAAAP12	<p>ATGGATGAAGGCTATTCAACATGGACTGGTTTACTGTACGTTTTCAATTTA ATTGTTGGGACTGGAGTGTGACTCTACCGCATGCATTTGTCCAGGCAGG ATGGGTCTTTGGAATTCTGCTTCTCTCAGCACTCGCTTTCACAAGTTATAT GGCTGTAACATTCGTCATAGAGGCAATGTCTCGGGCCAATGCTGTAAAAA TGACACTAAGATTGCGCCATCTTCAGAAATCCAAAGCAGCCTTTTTGAAG CAAATACAAGGAGACTCTGACGTAAGTGTGTCTGGGGGATGAAGAAGGT GATCATTCAAGGATACCTCCTGAAACATCTCCCTTAGTTCCGAATGAATAT ATTGATAAATTTCCAGCTGCACCAAGATCACTTTTCTCTGTTGATACTAAA GTTGAAATGGTGGAAATGGCTGAGCTCTTCTTTCCTCCATGGGGCAAGGT TTTCTTTTTTATAAATTTCTGCCTCTATTTATGTGGAGATTTGACGGTCTAT GCAGCAGCAGTTGGAAAATCTTTGGTTGATGTCTCATGTATGACCACCTC AATAAACTCAACTCATCCTGACAATGAATTGTGTTGGGAAGGGGCAACC ATCACTAGAAGAGGAGCTTATGCTATATTTTTGTTGCTATTTCGTGCTTACT CTTGACCGTTCGCCTTTTTTAATGTTTCAGAAAACGAAATACATCCAGAT GTTTACTACCCTCATGAGAACGCTTGCTTTCAGTGTCATGATTGTGCTGTC GGTGCAAAGAATCATAGACCCACACAGGATCATGGCGCCCCACCTGTC GTACGACCTGCTGGGATGCCTGCTTTATTCGGCGCATGCATCTACTCCTTT ATGTGCCACCACTCGTTACCAGCTCTCATCACACCAATCAAAGACAAGA GCAAGCTAAGCCGCTTCTTTCTTTTGATTTTATTCTCATTCTGACATTTTA TTTCATCCTCATCCTTACAAGCATTTTTGCTTTCCCAACATTGAGCAACT TCTTACACTGAATTTAGACCAGATTTAACACTAAGCTAGATCTAGAAAT AATCGATTATTTCTGATGTTATTCCCTGTTTTAACATTAAAGCGCCAGTTTC CCTATCATTGCTATCACATTAAGATACTTACAAGCTGCATCGGTTGGA GAGGATGGCCCCTGGGTGGTGGCAGGTTAGTTCTTCCAACAATCGCTG TAACCGTACCTATTATTGTCGCGCTTTTATTCACAAATATTGAAACAATTGT TGGCATTAAATGGATCTTATGCTGGGGCAGGAATACAATATGTTATTCTGT GTTTCTACTTCTTAGATCTCGTGCTTTAACTCCAGAAGCCCTCAAAAATG AAGTAAATCCACATCAATCGCCATTCAGTTCACCAATTTGGCCGCGTGCT CTTCTTTTGTGGGCAGTTTGTGTGTGTCATTTTTGTCTCGGTGAACCTAGCT GATAAGTTTCTGAACGTATCAGTTTTTTAA</p>

BtAAAP13	<p>ATGGCGACTGATCAGAAGACCAATCCACCCCAATTTGGATCTGATGAAG AGATCGGATATGTCGGTGATTCCATGAAGGCCCGATTATTAAGATGAC TATGACCCGGACAAAGACACAGGCGATAAAAATTTGACAACGTATTTTCG AGACATTGATTCACATGCTGAAAGTTAGTTTAGGTAAGTGAATTTTAGCG ATGCCCAAGGCGTTTTCCAATGCGGGTTATTTGCTGGGCATTATAGGCAC TCTTGCTGTTGGAGCCCTCAGTACTTATACAATGCAAATGCTTGTGCGGT CAGAATATGAGCTGTGTA AAAAGCGACGAGTTCCCAGAATGACGTATGC TCAAACATTGAGGCAGCATTGCGAGAAGGACCCAAGACATTTAGACCT TTAGCAGGAGCTGCGGGGGTGGTGTGCAAATAATTCTCTTTTTGTTTCA AGGCGGTGCTTGTGCGTGTACATTGTATTTCGTGGCTGAAAATCTGAAAG CGGTGGGAGATCAATACTTTGGCAAACGGATATCCGGCTCTACATGGCA TACTTGTGGGACCTTTGATCCTGATCTGTTGGTTGCGTAACTTTAAATAT TTGGCACCCGTTTCGTCCTTCGGTAACGTAATGACGTTGATCTGCTACTG CATTACGTTTTACTATATGCTCTCCGATTTGCCGAGTTTCTCCACCAGACA AGCGGTTGTTGAGTTGGATCGGTTTCTCTTTTTGAATTGGATCGTTTTCC TCTTTTATCGGAACGGCTCTTTTCGCGATGGAAGCGGTTGGGGTGGTGA TGCCTCTGAAGAGTGAGATGAAAAATCCACGCCAGTTTCGGGGCTGGTT TGGTGTGCTCAACTGTGCTATGGTGCCAATTACGATCCTCTACCTTCTGGT CGGTCTTGCCGGATATCTGAAGTATGGAGACTCAGCCAGGGGCAGCATCT CACTCAATTTGCCGGATAATGAAGTTCCCGCGCAATGCGTCAAAGTGATG TTGGCCTTCTCTGTCTACATTTGTTATGCAATCTGCGCCTATGTAACGTT CAAATGCTGTGGGGTGATTATCTGGAACCAAATTTGAAGAATCGAAGA AAAAATTAGTCTACGAATATATTGGAAGGACATTACTCGTTTTGGTGACAT TCGGACTGGCAGTTTCGATCCCGAACTTGGAGTTATTTATATCGTAATCG GTGCCCTAGGATTAGCGAATTTGGGCGTCGCTTTTCCA ACTATAATGGAG TTGCTCACACGTTGGGACAAATATCACGGCTGCCTTTTCGCTCTCTTCTT GCTCAAAAATATCTGTCTGTTATTCGTAGCCGTTTACGCATTTTTCATTGG AGGATCCACCAGTATTATCAACATCTACAAGAAAGTAATCGTAGGCTCGT GA</p>
BtAAAP14	<p>ATGGCAAGCGATCAGAAAAATGGAAGCACACCCGCACAGCAAGAAAGA GGTGACGTCATCAAACCCCAGGAGACACGGATTATGATCCAGATGAAG ACCTAGGAGAGAAAAATCTGACA ACTTACTTCGAGACATTACTTCATATG CTGAAAGTCAGCCTGGGCACTGGAGTTTTGGCGATGCCGAAAGCTTTTG CCAATGCTGGCTATCTTTTGGGTATGATTGGCACAATCATAGTCGGAGTTC TTTGTACTTACACAACGCAGATGCTTGTCCAATCAGAATACGAGCTGAGT AGAAGACTGCGAGTGCCCAGTATGACGTATCCTCAA ACTTTTGAAGCAG CGTTCTCAGAGGGACCGAAGCGATGCAGACCATTGCTAAAGCCGCGGG CGTTACGTGCAATCTGATTCTATTCCTTCTTCAATGCGGTCTCAGTTGTGT TTACATGGTATTCGTAGCTGACAATCTAAAGGCGGTATTGGACCAGTACAT CGGGACAACAGACATCAGACTATA CATGGCGTGTCTCTTGGGCCCACTG ATCATTCTCTGCTGGTTCGGTAACCTGAAATACTTGGCACCAGTGTCTTTC TTTGGTAATTCCATGACCATGATCTGCTACTGCATTACCTTCTGGTACGTT CTCACTGACCTGCCAAGCTTTTCCACCAGGAAAGCTGTTGTGCGATCTCA AACAGTTCCCACTCTTCATCGGCACGGCGCTGTTGCAATGGAGGCTATC</p>

	<p>AGCGTGGTTATACCTCTGAAGAACGAAATGAAAAGACCAGCACAGTTTC GCGGGTCGTTTCGGCGTGCTCAACTGCTCAATGGTGCCCATCACAATCTTG TATCTCCTTGTTGGACTTGGCGGGTATTTGAAATACGGGGATGCAGCAAG AGGAAGTATCTCTCAATTTACCAACAAGTGAAGTGCCAGCTCAATGTG TAAAATTGATGTTAGCTTTCTCAGTCTTGATTAGCAACACCGTACTAACGT ACGTAACGTCAACTATCCTTTGGGAAGAATTTCTAAAGTCAAGGTTTCGAA AATTTCGAAGAGAAAAGTTGTATGGGAGCTCTCTGCCAGAGCTTTCTTAGT TTAGCAACATTTGTTATAGCTGCTTCAATCCCTAACCTGGAGTTGTTTCAT ATCATTAATTGGAGCTCTGGGATTGGCAAACCTTGGCCTCGCTTTTCCAG TAATAGCGGAGACCCTCACATTCTGGGACAGATACCATGGTTGCTGGTTT TTCTTCTTCATTCTCAAAAATATCTGCTTGCTGCTCGCGGCGATCTACGCA TTCTTCATCGGCGGAGCAACCAGCATCATCACCATCTACGAAAAATTAAT GGATGGAACCTTATTTTAG</p>
BtAAAP15	<p>ATGACGAAAACGGAGAGCAAGGATATGATGTCGAAGATCAGCGAGGCG GAGAGGAACGGCTCGAAAACCAAATCATCGATGACAAATATGATTACG ACCCGTACGACCAGCCTGCGCCAGAAAATGCCACCTCATACGCAGATTC CCTCACGATCTTGCTCAAGTTCAGTTTGGGAACGGGGATTTTGGCAATGC CTCGATCATTTCACAACGCTGGTTACGTGGTTCGGTTTTATTGGAACCATG GTTATCGGATTTCTGACAACATACACGATTCACATGATCATGTCTGCCGAA TACGAGTTATGCAAAGGAAACGTGTCCCTAATATGTCTATCCTGAGAC CATGGAAGCAGCTTTTGAGTACGGACCACGAAAAATGCGAAAATTCAAA AATGCTGCGTGGTTTATGTGTTATATTTTCTACTCATCTATCAGACTGGTA CAAGTTGTATTTACTTGGTCTTCATTGCAGACAACCTTGAAAGAGGAATTA GATCTCTTTTTTGGTGGCTCCACGGACATCAGGATGGTGATTGTTTATCTT CTAATTCCTCTTATACTAATTTCAATGGTTCGAAATTTGAAACTCATATCAC CCCTTGCCTCGCTGGGACACATTTTCGTGATGATCTGCTTTAGTATCATCT TCTACTACATTTTCAGAGATATACCCAACATTGCTGAACGCAAACCAGTT GGAACCATGCAAGGCATTCTCTGTTCTTTGGCACTGTGCTTTTTGCAAT GGAAGCAATCGGAAGTGTGATGCCCGTCAAAAATGAGATGGCGAAACCT GAACAATTCACCAGCAGATTTGGAGTCATTAACATGGCCATGGTTCCAAT TGTTCTCTTGACACGATTATTGGTTTGTTCGGCTATTTGCAATACGGAGA CAAAACCAAAGGCAGTATCACATTGAATATGCCCCAACACAATCTGTTTG GACATACAGTGAAATTGCTCCTGGCAGCGTCTGTTTACATCAATTACGCT ATTTCAAACACTACGTCATTTACGACTTGGTGTGGCCCTGCCTGACCAGTAA GATGGAGAAGAAGTTCGCACAAGTTATCCTACGAGTATTGCGTGAGGATA GCTATCGTGCTAATTACATTTGGGTTCTCGATAGCCATTCCTAACTTGGAA CTGTTCAATTCGTTCCCTAGGATCTCTATGTTTAGTTAATTTAGGTATATTTTT CCCGTCAATTTACAAACCCTGACATTCTGGGACGAATTCAGGGGTCTTA GGTTTTACACGTTCCCTTATAAAAAATATTTTCTTGATTATAATTGCTATTTTA GGATTTGTTATCGGGGTTGGCAGGAGCTCCATTGAAATTTACAACACCGT AATTTTACCATCTTTCTCATAG</p>
BtAAAP16	<p>ATGGGTTTTAAAGAAAAATCAGACTCACAAGCAGTTCTCGATGTGGAAG TGAGCGGAGATAGCCCTGATTTGGATGAACATTATGAGCCACACGATTAC CAGCCACCTGGTAAATCAGCCTCGTACTGCGAGGCGCTTTTCATTTGGT</p>

	<p>AAAAGCCAGTTTGGGGACCGGAATTCTATGTATGCCGAGAGCTTTCTATA ATGCAGGCTATGTTCTAGGTGCGGTCGGCACGATCTTTGCAGGCGTGATA TCTGTGCTCAGCGTTCATCTAATTGCAAACACAGAGCATGAGCTTTGCAG GAGAAAGAGAATCCCTCGCATGACGTATCCGGAGACACTCGAAGCATCA TTTGAGATGGGCCCTGGGAATGTTAAACGATACAAAGGTATTGCAAGGG TGGTATGCACTGTAGCTTTAACTATGCAGGCATTTGGTAGTGA CTGTGTGT ATGCAATCTTTATAGCTGTAAATATCAAAGAGATTTGTGACCATTTTTTCA CCCCGCCCGCTGAAATTTTATCTGCTATGCCTGCTCGGACCCTTCATAG TAATTTGTTGGATACGGAATCTAAAATACTTGGCACCAGGATCCACAATA GGCACCGCCTGTAGCATATGCTGTATTGGTGCTGCCTACTATTATATATTTT CGCAGCCCATCACGACTGAAGGACGGAAAACCGTAGGATCCCTCAGGG ATTTTGCTCTCTTTTTCGGTGCTGCATTGTTTGCGCAAGGAGATTTTGGAG TTGTTGTACCTTTAAAAAACAGGATGACAAAACCGGCACAGTTTGGATC AGTTTGTGGTGTCTGTAACGTGGCGATGATTCCAGATGTTTTCCTCTACG TGATCATTGGTGTTTTCGGATATTTAGCATACGGTGATAACACGCGCGATC CAATCACACTAAACATGCCACAACTGGATTTGCTGGCGATTTAATCCGA TTCCTGTTGGCCGTCTCCGTTTTTTCGATGTATCCATTTGTAATTACGTT GTCATCGAGTTGCTCTGGGACAAAACTTGAAGCTAAAACTTCAAGATG TCAAGCATCGAAGCAAGTGGGAGTACGCTTTTCGAACAGCAGTGA CTTG CGCAAATATTCTATTCTGCATCGCCGTTCCAGTTTGGAAATTGGTTATGTC ACTAGTGGGATCATTGATGGTGCTGCCCTTTCATTATGGTTCCCCGCCAT CATGTACACGCTCACGTTTTGGGATGAGTACAGGGGCATTAAATTTGCAT TCTTCCACTCAGGTCCTCCATCCTTCTACTCACCGGAGTTTTCGCACTTG TAGTTTCCGTTAGCATCACGTTTTTTGAAATTTATGAAACCATGCTCTAG</p>
BtAAAP17	<p>ATGGGTCTTGAGAAAAAATCAGAATCACGAACAGTTCTCGACGTAGGGG TAAACGAGGATATTCCTGATTTTTTCGGATGAAA ACTATGAGCCACATGAT CATGAACCGGATGGCAAATCAGCCTCATACTTTCAGGCATTCAGCGTCTT GATGAAAGCTAGTTTAGGAACCGGTATACTAGGAATGCCGAGAGCTTTTT ACAAAGCAGGATACATTCTCGGTACAATAAGTACGATAATCTCTGGAGGA TTAACAATACTCAGCGTTCATTTAATCGCAAGAACAGAACATGAACTGTG CAGGCGGAAAAGAATACCGCGCATGACTTATCCTGAAGTAGCCGAAGCT GCATTTGAAAAGGGCGTTTTTCAGACGTTTTTAAGAGAGTTTCAAGAAATAT ATGTTTTTACGGCTTGGTTTTAACGGAATTTGGA ACTACCGCTGCGTATGC GATTGCCATTGCTGAAAATTTAAAAGCGGTCTGTGATAATAACTTTCCCC GGCTCCTCTGAGATTTTACCTTCTTTCCTCTTGGGACCCTTAGTTGTATT ATGCTGGATAAAAAATCTGAAGTCGCTAGCACCTGTGACATCGTTAGGGA CGTGTGTCAGTATTGGTTGCATCGGCACTATCTATTACTTCATCTTCTCGC AGCCAATCTCGCTCGAACACAGAAAGGCGTCCGGGTCATTCAATGACTT TGCCCTCTCCTTCGGCACTACATTGTTTCGCACTGGAAGCTTTCCAGAGA TTCTGCCGATCAAAAATAGGATGACGAAACCGGGGAGAATTTGGATCCAC TTTCGGTGTGCTAAACGCAGCAATGGTTCCCAACTGCATTGTGCGTGC TTTTCGGGTTTTTCGGGTATCTAGCCTACGGAAAAAATACTCTCAGTCCC ATCACTCTGAACTTGCCACAGACCGGAATGGTTGGAGACTTAATCAGGT TCCTCTTGGGTGCATCCATCTTCATGTCTTATCCAATCGGCAATTACGTTG</p>

	<p>TTGTTGAGCTTCTTTGGCACAAGAATTTGAAACTGAGATACGAAAAATA CCAGATTATTGGGAGTACGTATTCCGAACATGCGTGACGTGCTCTAACAT CTTATGCTGCATTGCTGTGCCAACTTGGAGCTAATCATGTCGTTGGTGG GATCTCTCATGGTGCCTGCTCTCGAGCTTTGGCTCCCTGCCATCATGCAC ACTATCACGTTCTGGAATGAGTACACAGGGATTAAATTCCTCATCTACGT GATAGGACCTTTCATTTCTAGTTATACTATTTGATAATGTTGAATGTTTGT CTTGTAACGATATTGTTAATTTTGTA</p>
BtAAAP18	<p>ATGTTATATTTTGCAGACCCAGCAATTGCGAAAATGGAGCTGGGTTGCAA TCGTGGCAAGATGGGCTTCAATAAAACAACGGACTCGCAGGCAGCCTTG GATGTAGATTTGAATGAGAAAAATCCAGAAATTGGTGAGAATTACGAGC CGTACAATCATGAACCAGCCGGTAAAACTGCCTCGTACATCGAGGCTCTG CTCATTTTGATAAAAGCCAGTGTTGGGACTGGCGTCTTGGGCATGCCAAG AGCTTTTTACAACGCGGGATACGTTCTTGGAAACCATGGGCACCGTTTTTG CTGGAATTTTAACCACCGTCACAGTTCATTTGATCTCAAACAGTGAACAT GAACTATGTAGACGGAAACGAATCCACAAATGAGTTACCCAGAAACTG TAGAGGCCGCATTTGAACATGGCCCTGGGAATCTAAACGGTTTAAAA CACGGCAAGGATAATATGTCAATTGGCTTTAGTGATGCTGGAGTTTGGCG CAGACTGCGCTTATGCGATATTCATAGCTGATAATATCAAAGAGATTGTG ACCACATCTTCTACCAGCTCCTGTGCGATTTTACCTGTTGTGCTTACTCG GGCCTTTGATCTTCATGTGTTGGATCAGGAATTTGAAGTTCCTGGCGCCA GGGTCAACTTTAGGGACTGGCTGCGCAATAGGGTGCCTGGGAGTTGTAT TTTATTTCATTTTCTCGCAGCCATCACGCTCGAGGGGAGAAAAGCGGCC GGATCACTAAAGGACTTTGCGCTTTTCTTTGGGCAAGTCTCTTCGCATT TGGAGCTTACGGAATGGTTGTTTCGTTAAAGAATAGAATGAGGAGGCC GCCAGTTTCGGATCTCCCTTCGGTGTGTAAATGTAGCGATGGTCCCAA TCTGGTCCTCTACGTTATCATGGGCTTCTTCGGTTATCTGGCATAACGGAAA CCAAACTAAAAGCTCCGTCACATTGAATCTACCGCAGACTGGATTCATCG GAGATTTGATTCGGATACTGATGGCAGGATCCATTTTACGACCTACCCAC TGTGTAATTACATTGTTGTTGAGCAACTTTGGCACAAAATTTGGCATTG AGATTTGAGGACAACAAACGTGTGATTTTCTGGGAGTATGTGTTTCGCAC GGCTTTAACTTGTGCAAATATCGCCTGCTGTATTGCAATACCAAATTTGGA GTTAGTCATGGCATTACGGGATCACTGATGGTTCCTACCCTTGGTATATG GTTTCCCAGCATCATATACACCCTCACATTCTGGAACAAATACACAGGGA TTAAATTTGCTTTCTTCCTTTCAAGAACCATTATCATAATGATCGTAGGTGT ATTTGCGTCCGTAATATCTCTCAGCACAACCGTCCGAGAAATTTATGGAA CTGCTTTCTAG</p>
BtAAAP19	<p>ATGGAGCTGGGTTGCAATCGTGGCAAGATGGGCTTCAATAAAACAACGG ACTCGCAGGCAGCCTTGGATGTAGATTTGAATGAGAAAAATCCAGAAAT TGGTGAGAATTACGAGCCGTACAATCATGAACCAGCCGGTAAAACTGCC TCGTACATCGAGGCTCTGCTCATTTTGATAAAAGCCAGTGTTGGGACTGG CGTCTTGGGCATGCCAAGAGCTTTTTACAACGCGGGATATATTCTTGGAA CCATGGGCACCGTTTTTGCTGGAATTTAACCACCGTCACCGTTCATTTG ATCTCAAACAGTGAACATGAACTATGTAGACGGAAACGAATCCACAAA TGACCTATCCGGAACCGTGGAAGCCGCATTTGAATATGGCCCTGGAAAT</p>

	<p>TCTAGACGATTTAAAAATACTGCAAGGATAATATGTTATTCAGCTTTAGTG CTGCTAGAGTTTGGCGCAGACTGCGCTTATGCGATATTCATAGCTGATAAT ATCAAAGAGATATGTGACCACATCTTCTCTCCAGCTCCTGTGCGATTTTAC CTGTTGTGCTTACTCGGGCCTTTGATCTTGATGTGTTGGATCAGAAATTTG AAGTTCCTGGCGCCAGGGTCGACTTTAGGAACTGGCTGCGCAATAGGGT GCGTGGGGGTTGTATTTTATTTCAATTTCTCGCAGCCATCACGCTCGAGG GGAGAAAAGCGGCCGGATCACTAAAGGACTTTGCGCTTTTCTTTGGGCA AGTTCTCTTCGCATTTGGAGCTTTTCGGAATGGTCGTACCGTTAAAGAACA GAATGAGGAGACCCGCCAGTTTCGGATCCCCCTTCGGTGTTGTAATGTA GCGATGGTCCCAAATCTAGTCCTCTATGTTATCATGGGCTTCTTCGGTTAT CTGGCATAACGAAACCAAACTAAAGCTCCGTCACATTGAATCTACCGC AGACTGGATTCATCGGAGATTTGATTCGGATACTGATGGCAGGATCCATT TTTACGACCTACCCACTGTGTAATTACATTGTTGTTGAGCAACTTTGGCAC AAAAATTTGGCATTGAGATTTGAGGACAACAAACGTGTGATTTTCTGGG AGTATGTGTTTCGTACGGCTTTAACTTGTGCAAATATCGCCTGTTGTATTG CAATACCAAATTTAGAGTTAGTCATGGCATTACGGGATCACTGATGGTT CCTACCCTTGGTATATGGTTTCCCTAGTATCATATACACCCTCACATTCTGGA ACAAATACACAGGGATTAAATTCGCTTTCTTCCTCTCAAGAACTATCATC ATAATGCTCGTGGGTGTATTTGCGTCCGTAATATCTCTCAGCACAAACCGTC CGAGAAATTTATGGAAGTCTTTCTAG</p>
BtAAAP20	<p>ATGCGTTTCAATAAAAATTCAGATTCGCAAGCAGCCATCGATGTGGAGGG AAGCGATAGTGTACCAACAATAGTGATGACTACGAGCCGCATGACCAA CTACCTCCTGCGAAATCAGCCTCGTATATCGAGTCTCTATTCTGATA AAAGCGACTTTAGGAACTGGAATCCTGGGCATGCCAGAGCCTTTTACA CCGCAGGGTATGTACTTGGAGCTGTGGAACACTTTTCGCTGGAATATTA ACAACAGGGAGCATGATCTTAATCGGCAAATCAGAGCATGAGCTTTGCA GGCGGAAAAGAATCCCCGTATGACGTATCCAGAAACAATGGAGGGCGGC ATTTGAGTTAGGCCCGGGATGTTTGAGGCGATTTAAAGGCGCTGCAAGG TTCCTAACGACAACCTGCAATAGTCATGTTGGAATTTGGCACGGACTGTGC GTATGCGATTTTCATCGCTGTAAATATTAAGAGATCTGTGAGCAACACTT CTCCCCGCGCCGCTAAGATTTTACCTCTTGCTTACTGGGACCACTAAT CGTGATGTGTTGGGTCCGCAATTTGAAGTATCTGGCCCCAGGGTCGACTT TAGGTAGTTTTTTCGCTGTGCGGTGCGTCGCTGCCGTTTATTACTACATAT TTTCCCAACCAATGACGCTGGAGGGGAAAAAAGCGGTCCGGTCTGTAA GAGACTTCTCTCTTCTTCGGTCAAGTCCTCTTCGCTCTAGGAGCGTTT GGTGTGGTTCGTGCCTTTGAAAAATAAGATGACAAGACCGGCACAATACG GATCGGTCTGCGGTGTAGTTAACGCAGCAACGATCCCAGATATATTTCTCT ACATCATCATCGGCGTTTTTGGGTATTTGGCTTACGGAGAAAACACACAA AACCAATCACTTTGAATATGCCGCAAACCTGGAATCGTTGGCGATTTGAT TCGGATTCTGTTAGCGTGCTCAATTTTACGACCTACCCTCTTTGCAATTA CGTTGTGATCGAACAACCTCTGGCACAAAACTTGAGGCTATGGCTTGGT GATGTCAAAAATCCACACCAATGGGAGTACGCATTCCGGACAGTTGTAA CGTGGCAAACGTCCTTTTTTGTATCGTGGTGCCAAGCTTGGAGTTGGTG ATGTCCCTCGTGGGATCCCTGATGGTGCCGGCACTTGGTCTCTGGTCCC</p>

	GGCCATCATGTACACACTCACGTTTTGGAACGAGTACAGAGGTGTGAAA TTCGCTCTCTTCTTACTCACATCCATCGTTCTCGCTTTGACCGGTATGTT GCCCTTGTTGTATCTCTGAGCACCCTCTCACTGAGATCTACGAACTGT TCTCTAG
BtAAAP21	ATGACACGTGACAATCATGTCCGCCTACACTTAGAAAATAGGCAATCGGT TAAACATGGGATTGACAACCCAGCAATGCTTGAAAACGGATCTACAGAG CAAGTTTGTACACCGGAAAAGAACGAGAAGAAGGTTTCAGAATCAAAG GAAGTTCTGACAAGGATAACCGTAGTAAAATCTCCAAGCAGTCTCGAAA AACCTCCTCTTGATGATGACTACGACCCCTATCTACACAGAGATGTTAAA CACCCAACATCATACTCCGACACATTCTTCCATATGCTGAAAGCAAGTTT AGGAACAGGAATCTTAGCCATGCCAACGCTTCCACAATGCTGGATTCA CCGTTGGGACGATAGGAACGCTTGTGATTGGATTCTTGTGTACATACGCC ATCACTCTCTGATCGGTGCAGGATACGAACTTTGCAGGGCGGCGAAAAG TCCCCAGTATGACGTACCCTCAAACGTCGGAGGCCGCCTTTGAGGAGGG CCCACAATGGCTTCGGTGGTTTACGCCTTATGCTGCGTTCCTACCCAATT GTTCCCTCATATTGTACCAAATCGGAGCCAGCTGTATCTACGTCGTTTTCAT GGCTAGTAACATCAAAGCGGTTTTCGACGAATACTACGCGGAAACAGAC GTGCGACTCTACATGGTTTACATCCTGATCCCTCTCATTCTGATCTGTTGG ATTCGAAACCTGAAGCTCCTAGCACCGTTTTCTTCGGCTGCCAACTTCGT GACCATCGTCAGTTTTGGAATCACCTTTTACTACATTTTCTCGGATATCCC GCACATTTACAACGACAGGCTGTTCGGGAAAGTGGAGAATATGCCGCTG TTTTTTGGAAGTGTGTTGTTTCGCCATGGAAGCCATTGGAGTGATTCTTCC TCTTGAGAACGAGATGGGCAATCCGAAAAGGTTTGCAAGTCCTTTCGGC GTCCTGAATACTTCTATGATACCCATTACTCTTCTGTACACTTTTGTGGGT TTTTTCGGCTACATGAAATTTGGAGAGAAAGCGGAAGGAAGCATAACTTT GAATCTTCCGAAAGATGAAGTGCTAGCTCAAAGTGTGAAGCTTATGTTG GCTGCTTCTATCTACATGTGCTACGCGTTATCTTGCTACGTAGCTTTTGATC TCATGTGGAATGGATGGATTGCGGCTAAATTGGAGAAAATGAACATAAA ACATTCTGGGAATACGTTACCAGAACCTCAATTGTCTTAGTCACATTCAC CCTGGCCGTGGCCATCCCCAACTTGGAACTGTTTCATCTCCCTGATCGGCG CCCTGTGCCTGGCCACGATGGGCATCGCCTTCCCGGCGATCATCCAGATG CTCACCTTCTGGGACTACTACCGCGGCTTCAGCTTCGTCCTCTTCTCAC GAAGAACATGATCCTTATCCTCATCGCCCTCCTCGGCTTCTTCATCGGCAC CAGCACCAGTCTGAACAAGATCTACCACGAGTTCTTTCTCAGCTGA
BtAAAP22	ATGAGCAATGAAGAAGTGCCTCTGTTGAGCGGTGTCGGAGGTGGTGTGCG GAAAATCGAAATGTTCCCTCAAAGGCCTGTCCCTGTTTTTCGCCTCCCTG TGCGTGATCGACCTCTTCGGGGTCTTCCCGATCGTAGCCCTTCCGAGAGC GATTGTCGATTGTGGTTGGCTGGGCCTTCTCTAGCATTACCGTATTTAC TTTACAAATTTACACAGCCCTCCTCCTCGGCCGATCATGGGTCATGGCTG AGATGATCGAGCCCTCAATCGTGAAAAGAGTAGGTATCCATATGCCGCA TTGGCAGAACTAATTTCAACACACGAATGAGAAAAGTTCGTACATTCC TGCTGGATATTACGATATTTGGGGGTGGAGTCCCTAATCTCCTAGTCGCCT CACAAAATTTGCAAAATTTGGGATTGAAGATAAGCAATTTTGAATGGGAT GTTTCTTATTGTTACTGGATGCTCCTGTTAGGAGTAGCTCTATGTCCTGCC

	<p>ATGTGGCTTGGCAGTCCAAAGGATATGAAGTGGTTAGCTGCGTCATCAGT CTGTATTGTGGTGA CTGTGGGTGCTCTAACCTGGTATTTGCTATTGCATGA ACCGTTGCCCCAGGTGCTGTGCCTCCCGATCTACCAGAAGTCTCATGGC AGTCTCTAGCTATAGCATATGGGATTCTCGCCTTCCAGTTTGATATCCATCC AATGATATTGACAGTGCAAGTAGATATGGAAAAGAAAAATAAACTAGGG CATGCAATTTTAGCCGGATTTCTAGTGAGTGGTGGTCTCTCAATCGTGAC ATGCATCATCATCTACTTGC GGTTCCGGAACCAGCATCAATTACAATATCTT GCCGGGGCTTCAGCCGCACATCTTGCTCTACGTTGATGCTTTTCTGGTAA CCCTTCAAATTTGCTTATCAATGGTCGTTGGAGGCACAGCGCTTTTTCAA GACGTTGAGGACAAACTTGGGGTTCGAGAGATTTC AATTGGAAACGAT GTGTGGTACGAAGTAGTATCCTGATGACGGCCGTATTAATCGGTGAGGCG GTGCCGCGGTTTGACCTGGTCATGGGGCTCCTCGGCGGTGCCCTCACCG GGCCTCTTATGTTTCATCCTACCTCCGATCATACTACAGACTTCGCTCCA TTCTTTGGCGCAAACA ACTTATTGCCCGGATTGATAGGTACGAAGCTGAC GGCGCTCGTCTCCGGAAGAGCTCCTCCGAAAACAACGCTGCCTCCTC AACAACTGAGCTACGCGCCTAACGCTTTCGGGTTGGTGACAAACGACAT GTCAACGGGCAAGGAGCCGATACCCACAGGCCCGGCTTCAGGGAGCTT CAGCTCGGAGACCTCCAGCAGCTGGGGTCCCTGCCGCAGCCCTACTTG CCCCCTCGGAGCTGCTCGACCCCCACTGGCGCCTCGGTCCCTGGTGC AACACCTCGTGGGACTCGTATCCACGGAAGTCGACGAGTCGGTGTCCCA ACTGGGATGCTGCGAGCTGGCTATGACGTTCTGTGATCGTGGGTGCTGGG ATAACGGCTACGGTCGTTGCCACGTACTACGCCCTCGTCGGGAACATCGC GTATGCCACGTTCTCGCCGCCGTGTATCGTCAGTGTGAACGAGGCTTCTA GGGCCATTTTCGACGAGCTCGTGACGTAG</p>
BtAAAP23	<p>ATGACGTATTTCCGACGATTTTATATAACCCCGATAAGTGCAGCGGTGAAT GTGGCATGGGCGACGATAAAAAGCGGTCAATCCGGAGGACAGCCCTTGCG TCGAACTTATCCAAAAAATGACGGGTCAGCGGACAGGTGAGGAGGCCG GAGGTGCCCAAGGCAAACAAGAGCCCAATGAGCACGTCAATTTCCGCC AGTTCAATGGCCCCAAGGCAACCGACAACACGGAAATGGCCACCATGTC TGGCTACGGCTCGGCCGATCGAGGCGACGAAGATGGTTTTCGGAGGCAAG CAAGTCAATTTTCCAAATCCAGGGCCACTACATTCGAGAGTGGGTGCA GCTTTGATGAGTTCGGGGAGAGGGGCAGGCACAAGATCAACGAATGGC AAGCAGCTTGGAATGTGACCAATGCAATTCAGGGAATGTTTCATCGTATCC CTGCCATTCAACGTGCTCCGAGGAGGTTACTGGGCAATCGGAGCGATGA TAGGAACCGCGTACATCTGCTGCTACACAGGTAAGATTCTGGTGGAGTGC TTGTACGAGCTGGACACGATGACCGGGGAGCGAGTCCGCGTGCGTGACT CATACTGTCCATCGCGCGGGAATGTTTCGGACCCTTGTGGGGCGCCAG GATCGTCAACATGGCTCAGATGATCGAGCTTCTCATGACGTGCATCCTCT ACGTCGTCGCTGCGGTGACCTCCTCATCGGAACCTTTCCCGAAGGCGT CATCGACACCCGGAGTTGGATGATGCTCGTCCGTTGCTTCCTGGTCCCTT TGGGCTTCCCTAAAATCTCTCCACCACGTCTCGACTCTCAGCTTCTGGTGC ACCATGTCCCACATCTTCATCAACGTCATCATCCTAGGCTACTGTTTGCTC GAGCTCCCCAGCTGGGGCTGGAGCAAAGTCAAGTGGACTCTGGACTTG GAGAACTTCCCCATCTCCCTGGGCGTCATCGTCTTCAGTTACACCTCTCA</p>

	<p>GATATTCTTGCCCAACCTCGAGGGGAACCTCATCGACCGCTCCAAGTTCCG ACTGGATGCTCGACTGGTCGCACATCGCCGCCGCAATTTCAAGTCCCTC TTCGGCTACATCTGCTTCTGACCTTCCAGAACGACACGCAGCAGGTCAT CACCAACAACCTCCACTCGCCCGCTTCAAGGGGCTCGTCAATTTTTTCC TCGTAATCAAAGCAATACTCTTATCCTCTGCCCTACTACGCTGCCTGCG ACCTCCTCGAGAAGTCCTTCTTCAAGGGTGCCCCGGAGACCCGGTCCC GACGATATGGCACATGGACGGCGAGCTCAAGGTCTGGGGTCTCGCCTTC CGAGTCGGCATCATCGTCGGCACCGTTCTCATGGCCATCCTCATCCCGCA TTTCATCATTTCTCATGGGTTTCATCGGGAATTTACAGGTACCATGTTGTC TTTCATCTGGCCGTGCTATTTCCATCTCAAGTTGAAGGGGGATACACTCG AGAGAAAGACTGTCATCTTCGACTGTTTTGTAATATGTTGGGCTGCCTT TTCGGGATCATCGGGATTTACGACTCCGGCTCGGCGATGATCAAGGCTTT TGAAATAGGACTTCCATTTAG</p>
BtAAAP24	<p>ATGGGTTTCAATAAGAAAACAGAATCTCAAAACACACTTGATCTCAGCG TGAATGATGAAAAGCCGAAAAGGATCTTGAAGGAGCAGGAGGAAG AGTATGATCCGTACAAACAGGAGCAGACAGGAAAACTACATCTTATTTT GAAGCCCTGCTAATTTTGATAAAAGCAAGTTTAGGAACAGGAATCTTAGG TATGCCGAGAGCTTTTTACAATGCTGGCTATCTCCTAGGAACAATCGGAA CTATTGTTGCCGGGGTTCTTACCACGCAAACGGCTCACATGATCTCAAGC ACGGAGTATGAATTGAGCAGGCGGAAGAGAGTTCCTCGGCTGACATATC CCGAGACAATAGAGGCAGCTTTTGAAGTGGGTCCGGGAAATTTTGGTTCG CTTCAAACGACTCGCTGGGCAAATTTGTTACGTATATATGATTCTGCTTGA GTTTGGCGGTGACTGTGTCTACGCAATTTTCATTGCAGAAAATGTGAAGG CGATCTGCGACCATAGGTACGGAACGCACAGTCTGCGGTGGTACCAGAC GTGGCTGATGATCCCTTTGATCCTGATCTGTTGGATCAAGAACCTGAAAT ACCTGGCCCCCGGCTCGACGCTGGGCACCGGCTGCGCCGTGGGTTGTTT CGGTGTCATCTACTACTTTCATATTTTCTCAGCCGATCGCCCTCGAGGGCCG CAAGGCCATCGGCTCCTTCCGGGAGTTCGCCCTCTTTTTTGGTACCGCCC TCTTTGCTATGGGCGCCTTCGGCATTGTTGTGCCTTTGAAGAACAAGATG ACAAACCCAAAACGATTTGGTGGCACCTTTGGAGTTGTCAATGCCACTAT GATTCCCAACATGACAATGTATGTGTTGATGGGATTTTTTGGTTATTTGGC ATACGGCAATTTACCCAAAGCAGCATCACACTAAATCTACCTCAGACCG GAGCGATTGGTGATGTAATAAGGATTTTGATGGCCGGATCTATTTTCACGA CGTATCCATTGTGCAATTACGTGGTTACCGACATGGTGTGGCATAAGTGG ATGAAGCTCAAATTCGGGGACAACAAACATTTGGACAAGTGGGAATACG TTTTCAGGACCTGCTTGTGTTTACCAATTAATTGTGCTGCATCGCGATT CGAACTTGGAGCTGTTTCATGTCCCTGAGCGGCTCGTTGTGCCTCCCTGCC CTGGGTATCTTCTTCCCGATCATCATCCACACCCTCACCTTCTGGCACTCC TACACCGGCTGGCGCTTCTTCTTCTCCTCTTCCGGGCTGCCCTCATCGTC GCGCTCGGCCCTTTGCCTTCTCGTCTCTTTCAGCACCACCGTTTACGA GATCGTCACCTCAATTTTCTCGCCGAGGACAATCATGTCTGA</p>
BtAAAP25	<p>ATGAGCAATGAAGAAGTACCTCTGTTGAGCGGTGTCGGAGGTGGTGTCCG GAAATTCGAAATGTTCCCTTCAAAGGCCGTGCCCTGTTCTTCGCCCTCCCTG TGCGTGATCGACCTATTCGGGGTCTTCCCGATCGTAGCCCTTCCGAGAGC</p>

GATTGTCGATTGTGGTTGGCTGGGCCTTCCTCTAGCATTACCGTATTTAC
TTTACAAATTTACACAGCCCTCCTCCTCGGCCGATCATGGGTCATGGCTG
AGATGATCGAGCCCTCTATCGTGGAAAAGAGTAGGTATCCATATGCCGCA
TTGGCAGAACTAACTTTCAACACACGAATGAGAAAAGTTTCGTACATTCC
TGCTGGATATTACGATATTTGGGGGTGGAGTCCCTAATCTCCTAGTCGCCT
CACAAAATTTGCAAATATTGGGATTGAAGATAAGCAATTTTGAATGGGAT
GTTTCTTATTGTTACTGGATGCTCTTGTTAGGAGTAGCTCTGTGTCCTGCC
ATGTGGCTTGGCAGTCCAAAGGATATGAAGTGGTTAGCTGCGTCATCAGT
CTGTATTGTGGTAACTGTGGGTGCTCTAACCTGGTATTTGCTATTGCATGA
ACCGTTGCCCCAGGTGCTGTGCCTCCCGTTCTACCAGAAGTCTCATGGC
AGTCTCTAGCTATAGCATATGGGATTCTCGCCTTCCAGTTTGATATCCATCC
AATGATATTGACAGTGCAAGTAGATATGGAAAAGAAAAATAAACTAGGG
CATGCAATTTAGCCGGATTTCTAGTGAGCGGTGGTCTCTATCGTGAC
ATGCATCATCTACTTGCGGTTCGGAACCAGCATCAATTACAATATCTT
GCCGGGGCTTCAGCCGCACATCTTGCTCTACGTTGATGCTTTTCTGGTAA
CCCTTCAAATTTGCTTATCAATGGTGGTTGGAGGCACAGCGCTTTTTCAA
GACGTCGAAGACAACTTGGGGTTCGAGAGATTTCAATTGGAAACGAT
GCGTGGTACGAAGTAGTATCCTGATGACGGCCGTATTAATCGGTGAGGCG
GTGCCGCGTTTTGACCTGGTCATGGGGCTCTTGGGTGGTGCCTCACTG
GACCTCTTATGTTTCATCCTACCTCCAATCATACTACAGACTTCGCTCCA
TTCTTTGGCGCAAACAACCTTATCGCCCGGATTGACAGGTACGAAGCTGA
CGGCGCTCGTCTCCGAGAAGAGCTCCTACGGAAAACAACGCTGCCTCCT
CAACAACCTGAGCTACGCGCCCAACGCTTTCGGGGTTGGTGACCAACGACA
TGTCAACGGGCAAGGAGCCCATACCCACGGGCCCGGCCTCAGGGAGCTT
CAGCTCGGAGACCTCTAGCAGCCTGGGGTCCCTGCCGCAGCCCTACTTG
CCCCGTCGGAGCTGCTCGACCCCCACTGGCGCCTCGGTCCCTGGTAC
AACACCTCGTGGGACTCGTATCCACGGAAGTCGACGAGTCGGTGTCCCA
ACTGGGATGCTGCGAGCTGGCTATGACGTTTCGTGATCGTGGGTGCTGGG
ATAACAGCTACCGTCGTTGCCACGTACTACGCCCTTGTCGGGAACATCGC
GTATGCTACGTTCTCGCCCGCGTGTATCGTCAGTGTGAACGAGGCCTCTA
GGGCCATTTTCGACGAGCTCGTGACGTAG