

**Table S1. Primers used for PCR and qPCR**

Primer name	Primer sequence (5'-3')
CCND1-QF	GTGAGGAACAGAAGTGCGAAGA
CCND1-QR	TTGAGTTTGGAGGCCAGGAA
MCM7-QF	GGCTGACTACATCACAGCAGCAT
MCM7-QR	CTTCTTTCTCCACCACATCCAC
CCND3-QF	TTTCCTGGCCTTCATTCTGC
CCND3-QR	GATCATGGATGGCGGGTACA
CCNB2-QF	TCATGTGACTATTAGGCGAACTG
CCNB2-QR	ACCCTTTGGAGCCAACCTTTC
POLA1-QF	TGATGATGGTATTGGCTATGTGG
POLA1-QR	CCTCTTGTCTTTATTGCGTGCT
POLE2-QF	TACCTCTTTATGTCTGCCCAGTGT
POLE2-QR	AGAGCCAGGGTTTATGCAGAGG
P16-F	GAGCAGCATGGAGCCTTCGG
P16-R	CATGGTTACTGCCTCTGGTG
PDL1-QF1	GCTGCACTAATTGTCTATTGGGA
PDL1-QR1	AATTCGCTTGTAGTCGGCACC
IDO1-QF	ATGCAGACTGTGTCTTGGCA
IDO1-QR	AGCTATTTCCAACAGCGCCT

**Figure legends**

Fig. S1. MSC derived from hESC line CT3 in SF- or SC condition.

(A) The phenotypes of SF- and SC-EMSC generated from CT3 hESC were analyzed via flow cytometry. The percentage of each indicated cell surface marker was shown on each plot. (B) Tri-lineage differentiation potentials of SF- and SC-EMSC were detected by culturing EMSCs in appropriate differentiation induction media. Osteocytes, chondrocytes and adipocytes were detected via Alizarin Red, Alcian Blue, and oil red O staining, respectively. Bars, 200  $\mu$ m.

**Fig. S1**

