

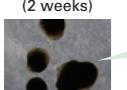
StemFit For Differentiation can support spontaneous differentiation of hiPSCs via EB formation

Method

Attached culture (~3 weeks)


< Expansion Medium >

- StemFit Basic 03 (Ajinomoto) or Essential 8™ (E8, Thermo Fisher Scientific)
- on 0.5 $\mu\text{g}/\text{cm}^2$ Vitronectin-N (Thermo Fisher Scientific)

EB formation (2 weeks)


< EB formation Medium >

- DMEM/F12+20% StemFit Diff. (StemFit Diff., Ajinomoto) or Essential 6 (E6, Thermo Fisher Scientific)
- on ultra-low attachment microplate (Corning)

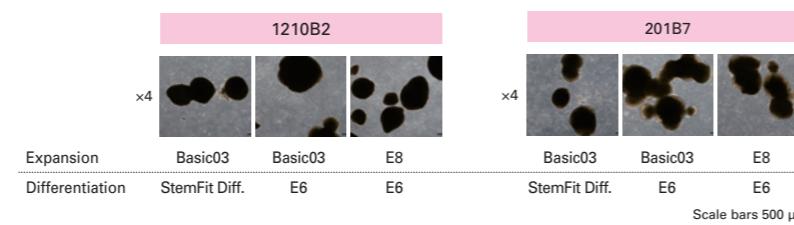
Analyze gene expression by TaqMan™ hPSC Scorecard panel (Thermo Fisher Scientific)

Combination of expansion and differentiation medium

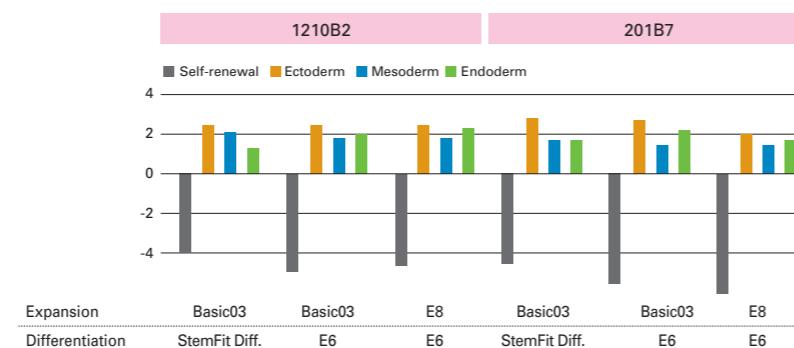
hiPSC	Expansion	Differentiation
1210B2 (P31-36)	Basic03	StemFit Diff.
	E8	E6
	E8	E6
201B7 (P37-42)	Basic03	StemFit Diff.
	E6	E6
	E8	E6

Result

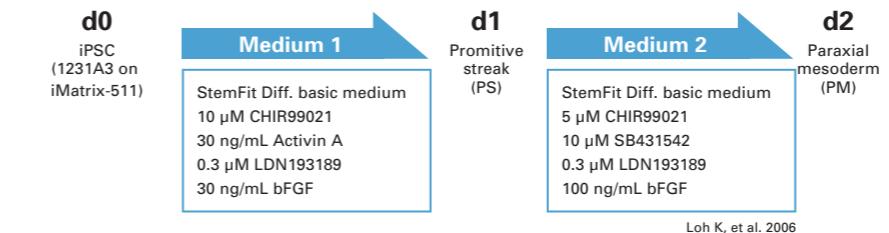
Comparable EBs were formed under each condition.



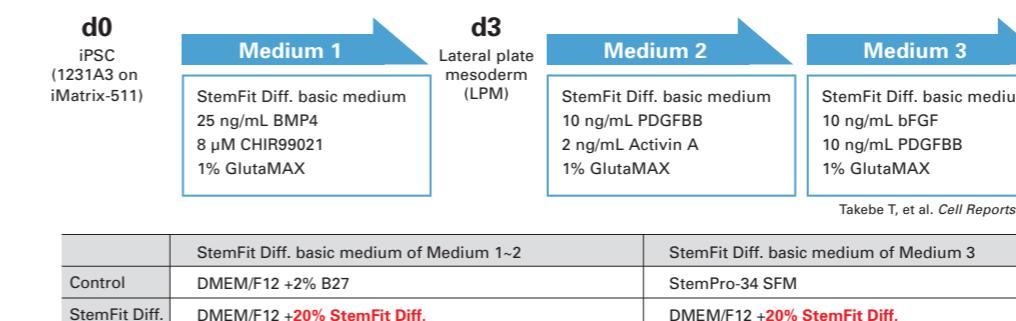
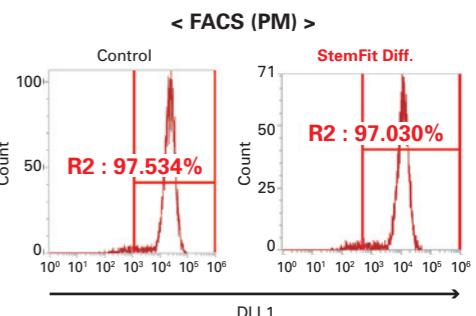
StemFit Diff. induced spontaneous differentiation into 3 germ layers.



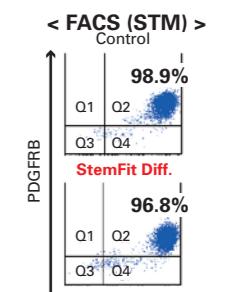
Mesoderm (Paraxial mesoderm, Septum transversum mesenchyme)



Control	RPMI1640 +2% B27
StemFit Diff.	RPMI1640 +20% StemFit Diff.



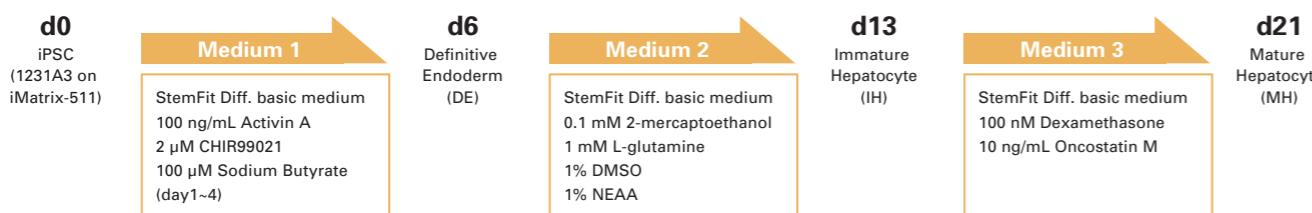
Control	DMEM/F12 +2% B27	StemFit Diff. basic medium of Medium 3
StemFit Diff.	DMEM/F12 +20% StemFit Diff.	DMEM/F12 +20% StemFit Diff.



ALCAM
Sekine K, et al.
in preparation

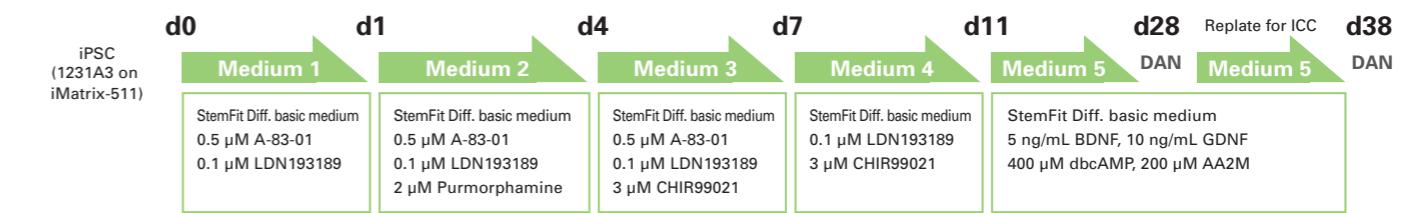
StemFit For Differentiation is useful for lineage-specific differentiation in replacement of serum-free supplement

Endoderm (DE-Hepatocyte)



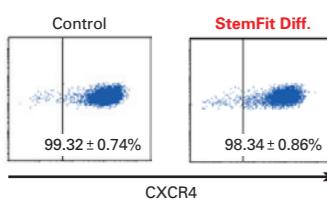
	StemFit Diff. basic medium of Medium 1	StemFit Diff. basic medium of Medium 2	StemFit Diff. basic medium of Medium 3
Control	RPMI1640 +2% B27	KnockOut DMEM +20% KSR	HCM without EGF (Lonza) +5% FBS
StemFit Diff.	RPMI1640 +20% StemFit Diff.	StemFit Basic03 (Ajinomoto)	DMEM +5% StemFit Diff.

Ectoderm (Dopaminergic neuron : DAN)

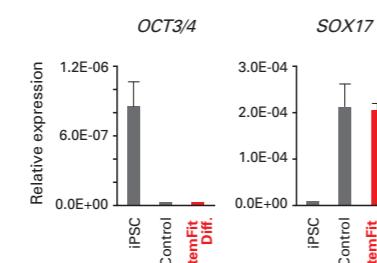


	StemFit Diff. basic medium of Medium 1~4	StemFit Diff. basic medium of Medium 5
Control	GMEM +8% KSR +1 mM sodium pyruvate +1 mM NEAA +100 μM 2-ME +4.4 μM VE acetate	Neurobasal medium +B27 Vitamin A
StemFit Diff.	DMEM/F12 +20% StemFit Diff. +4.4 μM VE acetate	DMEM +20% StemFit Diff. +0.5 mM sodium pyruvate

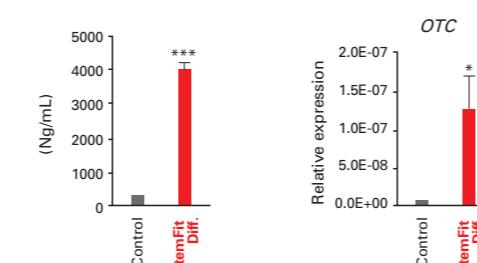
< FACS (DE) >



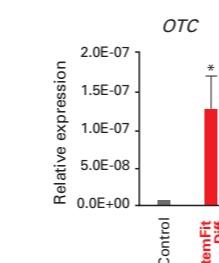
< real-time PCR (DE) >



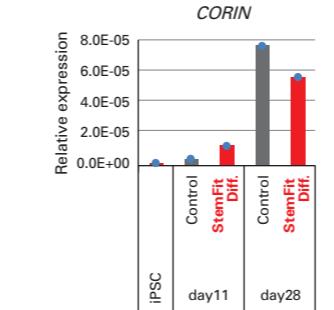
< hALB ELISA (MH) >



< real-time PCR (MH) >



< real-time PCR (DAN) >



< ICC (DAN) >

