

Materials List for:

Directed Differentiation of Primitive and Definitive Hematopoietic Progenitors from Human Pluripotent Stem Cells

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Materials

Name	Company	Catalog Number	Comments
Iscove's Modified Dulbecco's Medium (IMD)	Corning	10-016	
Fetal Bovine Serum (FBS), ES cell rated	Gemini Bioproducts	100-500	
Fetal Bovine Serum (FBS)	Hyclone	SH30396.03	
L-glutamine, 200 mM solution	Life Technologies	25030-081	
Penicillin-streptomycin	Life Technologies	15070-063	
0.25% Trypsin-EDTA	Life Technologies	25200056	
0.05% Trypsin-EDTA	Life Technologies	25300054	
Gelatin, porcine skin, Type A	Sigma-Aldrich	G1890	
Alpha-MEM	Life Technologies	12000-022	
DMEM-F12	Corning	10-092-CV	
Knock-out serum replacement	Life Technologies	10828028	"KOSR"
Non-essential amino acids (NEAA)	Life Technologies	11140050	
b-mercaptoethanol, 55 mM solution	Life Technologies	21985023	
Hydrochloric acid	Sigma-Aldrich	H1758	
Fraction V, Bovine Serum Albumin	Fisher Scientific	BP1605	
Ham's F12	Corning	10-080	
N2 supplement	Life Technologies	17502048	
B27 supplement, no vitamin A	Life Technologies	12587010	
Stempro-34 (SP34)	Life Technologies	10639011	"SP34"
Growth factor reduced Matrigel	Corning	354230	"MAT"
L-ascorbic acid	Sigma-Aldrich	A4403	
Human serum transferrin	Sigma-Aldrich	10652202001	
Monothioglycerol (MTG)	Sigma-Aldrich	M6145	
Collagenase B	Roche	11088831001	
Collagenase II	Life Technologies	17101015	
DNaseI	Calbiochem	260913	
Phosphate Buffered Saline (PBS)	Life Technologies	14190144	
bFGF	R&D Systems	233-FB	
BMP4	R&D Systems	314-BP	
Activin A	R&D Systems	338-AC	
VEGF	R&D Systems	293-VE	
SCF	R&D Systems	255-SC	
IGF-1	R&D Systems	291-G1	

IL-3	R&D Systems	203-IL	
IL-6	R&D Systems	206-IL	
IL-7	R&D Systems	207-IL	
IL-11	R&D Systems	218-1L	
TPO	R&D Systems	288-TP	
EPO	Peprotech	100-64	
Flt-3 ligand (FLT3-L)	R&D Systems	308-FK	
CHIR99021	Tocris	4423	
IWP2	Tocris	3533	
Angiotensin II	Sigma-Aldrich	A9525	
Losartan Potassium	Tocris	3798	
CD4 PerCP Cy5.5 Clone RPA-T4	BD Biosciences	560650	Dilution 1:100; T cell assay
CD8 PE Clone RPA-T8	BD Biosciences	561950	Dilution 1:10; T cell assay
CD34 APC Clone 8G12	BD Biosciences	340441	Dilution 1:100; EHT assay
CD34 PE-Cy7 Clone 8G12	BD Biosciences	348801	Dilution 1:100; Hemogenic endothelium
CD43 FITC Clone 1G10	BD Biosciences	555475	Dilution 1:10; Hemogenic endothelium
CD45 APC-Cy7 Clone 2D1	BD Biosciences	557833	Dilution 1:50; T cell assay
CD45 eFluor450 Clone 2D1	BD Biosciences	642284	Dilution 1:50; EHT assay
CD56 APC Clone B159	BD Biosciences	555518	Dilution 1:20; T cell assay
CD73 PE Clone AD2	BD Biosciences	550257	Dilution 1:50; Hemogenic endothelium
CD184 APC Clone 12G5	BD Biosciences	555976	Dilution 1:50; Hemogenic endothelium
4',6-diamidino-2-phenylindole (DAPI)	BD Biosciences	564907	Dilution 1:10,000; T cell assay
OP9 DL4 cells			Holmes, R. and J.C. Zuniga-Pflucker. Cold Spring Harb Protoc, 2009. 2009(2): p. pdb prot5156
MethoCult H4034	Stemcell Technologies	4034	"MeC"
Milli-Q water purification system	EMD Millipore		
5% CO2 incubator			Set at 37 C
Multigas incubator			Set at 37 C, 5% CO2, 5% O2
6 well tissue culture plate	Corning	353046	
24 well tissue culture plate	Corning	353226	
6 well low-adherence tissue culture plate	Corning	3471	
24 well low-adherence tissue culture plate	Corning	3473	
35 mm tissue culture dishes	Corning	353001	
Blunt-end needle, 16 gauge	Corning	305198	
3 cc syringes	Corning	309657	
5 mL polypropylene test tube	Corning	352063	
5 mL polystyrene test tube	Corning	352058	
15 mL polypropylene conical	Corning	430791	
50 mL polypropylene conical	Corning	430921	
2 mL serological pipette	Corning	357507	
5 mL serological pipette	Corning	4487	

10 mL serological pipette	Corning	4488	
25 mL serological pipette	Corning	4489	
Cell scrapers	Corning	353085	
2.0 mL cryovials	Corning	430488	
5 mL test tube with 40 μ M cell strainer	Corning	352235	
40 μ M cell strainer	Corning	352340	
Cell culture centrifuge			
Biosafety hood			
FACS ArialI or equivalent			
LSRii or equivalent			
FlowJo software	TreeStar		
Water bath			Set at 37 C
0.22 μ M filtration system	Corning		
Autoclave			
4 C refrigerator			
-20 C Freezer			
-80 C Freezer			