

Materials List for:

Ex Vivo Expansion of Hematopoietic Stem Cells from Human Umbilical Cord Blood-derived CD34⁺ Cells Using Valproic Acid

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Materials

Name	Company	Catalog Number	Comments
Expansion Media	Sigma-Aldrich	Stemline II stem cell expansion media S0192-500ML	
AO/PI (acridine orange/propidium iodide) staining solution for live/dead Mammalian nucleated cells.	Nexcelom	CS2-0106-25mL	
APC Mouse Anti-Human CD34 Clone 581	BD BIOSCIENCE	555824	
APC Mouse IgG1, κ Isotype Control Clone MOPC-21	BD BIOSCIENCE	555751	
autoMACS Rinsing Solution	MACS Miltenyi Biotec	130-091-222	
BD Falcon 15 mL Tube	BD Biosciences	352097	
BD Falcon 5 mL Polystyrene Round-Bottom Tube	BD Biosciences	352063	
BD Falcon 50 mL Tube	BD Biosciences	352098	
Bovine serum albumine solution	Sigma-Aldrich	A8412	
CD34 MicroBead Kit, contain cd34 beads and fcr blocking reagent, human	Miltenyi Biotec	130-046-703	
Cell analyzer	BD Biosciences	FACS Canto II	
Cell analyzer and sorter	BD Biosciences	FACS Aria II	
Cell counter	Nexcelom	Cellometer Auto 2000 Cell Viability Counter	
Cell separator device	autoMACS Pro Separator Miltenyi Biotec		
Counting Chambers	Nexcelom	CHT4-PD100-002	
Density gradient media	GE Healthcare Bio-Sciences AB	17-1440-03	
Ethylene diamine tetra-acetic acid (EDTA)	Sigma-Aldrich	E8008-100ML	
FITC anti-human CD90 (Thy1) Clone 5E10	BIOLEGEND	328108	
FITC Mouse IgG1, κ Isotype Ctrl (FC) Antibody	BIOLEGEND	400109	
Inverted microscope			
PBS	Corning cellgro	21-040-CV	
Penicillin-Streptomycin	Thermo Fisher Scientific	15140122	
Recombinant Human Flt-3 Ligand Protein	R&D Systems	308FKN	
Recombinant Human IL-3 Protein (IL-3)	R&D Systems	203-IL	

Recombinant Human SCF Protein	R&D Systems	255-SC	
Recombinant Human Thrombopoietin Protein (TPO)	R&D Systems	288-TP	
Total Antibody Compensation Bead Kit	thermofisher	A10497	
Umbilical Cord-blood	Placental Blood Program at the New York Blood Center	http://nybloodcenter.org/products-services/blood-products/national-cord-blood-program/cord-blood-101/	
Valproic acid sodium salt	Sigma-Aldrich	P4543	