

Materials List for:

Isolation and Expansion of Mesenchymal Stem/Stromal Cells Derived from Human Placenta Tissue

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Materials

Name	Company	Catalog Number	Comments
Reagents			
HBSS	Gibco/Invitrogen	14185-052	Long name: Hanks Balanced Salt Solution
FBS	Gibco/Invitrogen		Long name: Fetal Bovine Serum
trypsin-substitute	Gibco/Invitrogen	12563-029	Long name: TrypLE Select
DMEM-LG	Gibco/Invitrogen	11885-092	Long name: Dulbecco's Modified Eagles Medium-Low Glucose
DMEM-HG	Gibco/Invitrogen	11965118	Long name: Dulbecco's Modified Eagles Medium-High Glucose (4.5 g/L)
PBS (Mg+Ca+ free)	Gibco/Invitrogen	14190-250	Long name: Dulbecco's Phosphate buffered saline, magnesium and calcium free
Anti- anti-	Gibco/Invitrogen	15240-062	Long name: antibiotic-antimycotic solution x100
paraformaldehyde powder or 4% solution	any		
Collagenase I	Invitrogen	17100-017	2,500 U/ml
Dnase I	Sigma	D5025	10 mg/ml in 0.15 M NaCl
Dispase	Invitrogen	17105-041	10 mg/ml in water (20,000 U/ml).
Material	Company	Catalog Number	Comments
Disposables:			
50 ml centrifuge tubes	Falcon or any brand		
petri dishes, sterile plastic (25 cm and 10 cm diameter)	Nunc		
Cell strainers (100 µm)	Becton Dickinson	352340	
175 and 75 cm ² (T175 and T75) tissue culture flasks	Nunc		
5 ml, 10 ml, 25 ml sterile serological pipettes	any brand		
Material	Company	Catalog Number	Comments
Equipment:			
Centrifuge			
tissue culture incubator 37 °C, 5% CO ₂			
Biological safety cabinet			

Sterile scissors and tweezers			
Tube racks			
Pipette-boy or equivalent			
Gilson type pipetters and sterile tips 1,000 µl, 200 µl, 20 µl.			
rocking or shaking incubator (37 °C)			
personal protective equipment			
cleaning solutions (suitable for blood)			
waste containers, correct disposal bins for tissue/blood			
Reagents for MSC characterization			
Antibody (Clone ID)	Manufacturer	Catalogue No.	Isotype
CD73 (AD2)	Miltenyi Biotec	130-095-183	Mouse IgG1
CD105 (43A4E1)	Miltenyi Biotec	130-094-941	Mouse IgG1
CD90/Thy-1 (AC122)	Miltenyi Biotec	130-095-403	Mouse IgG1
CD45 (5B1)	Miltenyi Biotec	130-080-202	Mouse IgG2a
CD34 (AC136)	Miltenyi Biotec	130-090-954	Mouse IgG2a
HLA-DR (AC122)	Miltenyi Biotec	130-095-298	Mouse IgG2a
CD31 (PECAM-1)	BD Pharmingen	555446	Mouse IgG1
CD146 (541-10B2)	Miltenyi Biotec	130-092-849	Mouse IgG1
CD44 (DB105)	Miltenyi Biotec	130-095-180	Mouse IgG1
Isotype Controls (Clone ID)	Manufacturer	Catalogue No.	
Mouse IgG1 Isotype (IS5-21F5)	Miltenyi Biotec	130-092-214	
Mouse IgG1 Isotype (IS5-21F5)	Miltenyi Biotec	130-092-212	
Mouse IgG1 Isotype (IS5-21F5)	Miltenyi Biotec	130-092-213	
Mouse IgG2a (S43.10)	Miltenyi Biotec	130-091-837	
Mouse IgG2a (S43.10)	Miltenyi Biotec	130-098-849	
MACS Buffer	Miltenyi Biotec	130-091-221	
Osteogenic differentiation	Manufacturer	Catalogue No.	
DMEM-HG	Gibco/Invitrogen	11965118	Long name: Dulbecco's Modified Eagles Medium-High Glucose (4.5 g/L)
FBS	Gibco/Invitrogen		Long name: Fetal Bovine Serum
Anti- anti-	Gibco/Invitrogen	15240-062	Long name: antibiotic-antimycotic solution x100
Dexamethasone	Sigma	D4902	
β-Glycerol Phosphate	Sigma	50020	
L-ascorbic acid 2-phosphate	Sigma	A8960-5G	
Alizarin Red S	Sigma	A5533-25G	For calcium matrix staining
Adipogenic differentiation	Manufacturer	Catalogue No.	
DMEM-HG	Gibco/Invitrogen	11965118	Long name: Dulbecco's Modified Eagles Medium-High Glucose (4.5 g/L)
FBS	Gibco/Invitrogen		Long name: Fetal Bovine Serum
Anti- anti-	Gibco/Invitrogen	15240-062	Long name: antibiotic-antimycotic solution x100

insulin	Sigma	I2643	
Dexamethasone	Sigma	D4902	
Indomethacin	Sigma	I7378	
3-isobutyl-1-methyl xanthine	Sigma	I5879	
Oil Red O solution	Sigma	O1391-250ML	For lipid vacuole staining
XY FISH kit to determine fetal or maternal origin of cells			
XY chromosome FISH kit	Vysis (Abbott Molecular)	07J20-050	Long name: CEP X SpectrumOrange/Y SpectrumGreen Direct Labeled Fluorescent DNA Probe Kit