

Materials List for

Isolation and Functional Assessment of Human Breast Cancer Stem Cells from Cell and Tissue Samples

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Materials

Name	Company	Catalog Number	Comments
7-Aminoactinomycin D (7AAD)	BD	51-68981E	suggested: 0.25 µg/1x10 ⁶ cells
Acetone	Fisher	A18-1	
Aldehyde dehydrogenase (ALDH) substrate	Stemcell Technologies	1700	Sold commercially as part of the ALDEFLOUR Assay kit; follow manufacturer's instructions for ALDH substrate preparation
Basement membrane extract (BME)	Corning	354234	Sold under the commercial name Matrigel
Cell culture plates: 6 well	Corning	877218	
Cell culture plates: 60mm	Corning	353002	
Cell culture plates: 96-well ultra low attachment	Corning	3474	
Cell strainer: 40 micron	BD	352340	
Collagen	Stemcell Technologies	7001	Prepare 1:30 dilution of 3 mg/mL collagen in PBS
Collagenase	Sigma	11088807001	1x
Conical tubes: 50 mL	Fisher scientific	05-539-7	
Crystal violet	Sigma	C6158	Use 0.05% crystal violet solution in water for staining
Dispase	Stemcell Technologies	7913	5U/mL
DMEM:F12	Gibco	11330-032	1x, With L-glutamine and 15 mM HEPES
DNase	Sigma	D5052	0.1 mg/mL final concentration
FBS	Avantor Seradigm Lifescience	97068-085	
Flow tubes: 5ml	BD	352063	Polypropylene round-bottom tubes
Methanol	Fisher	84124	
mouse anti-Human CD24 antibody	BD	561646	R-phycoerythrin and Cyanine dye conjugated Clone: ML5
mouse anti-Human CD44 antibody	BD	555479	R-phycoerythrin conjugated, Clone: G44-26

N,N-diethylaminobenzaldehyde (DEAB)	Stemcell Technologies	1700	Sold commercially as part of the ALDEFLOUR Assay kit; follow manufacturer's instructions DEAB preparation
PBS	Wisent Inc	311-425-CL	1x, Without calcium and magnesium
Trypsin-EDTA	Gibco	25200-056	
Mammosphere Media Composition			
B27	Gibco	17504-44	1x
bFGF	Sigma	F2006	10 ng/mL
BSA	Bioshop	ALB003	04%
DMEM:F12	Gibco	11330-032	1x, With L-glutamine and 15 mM HEPES
EGF	Sigma	E9644	20 ng/mL
Insulin	Sigma	16634	5 µg/mL
3D Organoid Media Composition			
A8301	Tocris	2939	500 nM
B27	Gibco	17504-44	1x
DMEM:F12	Gibco	11330-032	1x, With L-glutamine and 15 mM HEPES
EGF	Sigma	E9644	5 ng/mL
FGF10	Peprtech	100-26	20 ng/mL
FGF7	Peprtech	100-19	5 ng/mL
GlutaMax	Invitrogen	35050-061	1x
HEPES	Gibco	15630-080	10 mM
N-acetylcysteine	Sigma	A9165	1.25 mM
Neuregulin β1	Peprtech	100-03	5 nM
Nicotinamide	Sigma	N0636	5 mM
Noggin	Peprtech	120-10C	100 ng/mL
R-spondin3	R&D	3500	250 ng/mL
SB202190	Sigma	S7067	500 nM
Y-27632	Tocris	1254	5 µM