

Materials List for:

An Alternative Culture Method to Maintain Genomic Hypomethylation of Mouse Embryonic Stem Cells Using MEK Inhibitor PD0325901 and Vitamin C

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Materials

Name	Company	Catalog Number	Comments
fetal bovine serum Australia source	Corning	35-076-CV	Component of mouse ES cell medium
DMEM/high glucose	Hyclone	SH30022	Component of mouse ES cell medium
LIF	Millipore	ESG1107	Component of mouse ES cell medium
non-essential amino acids (NEAA)	Gibco	11140050	Component of mouse ES cell medium
sodium pyruvate	Gibco	11360070	Component of mouse ES cell medium
L-glutamine	Gibco	25030081	Component of mouse ES cell medium
penicillin streptomycin solution	Gibco	15140122	Component of mouse ES cell medium
PBS	Sigma	P5493	Cells rinse
trypsin	Hyclone	SH30042	Cell dissociation
gelatin	Sigma	48722	Dishes coating
PD0325901	Stemolecule	04-0006-10	small-molecule chemical for cell culture
CHIR99021	Stemolecule	04-0004	small-molecule chemical for cell culture
vitamin C	Sinopharm Chemical Reagent Co.,Ltd	XW00508171	small-molecule chemical for cell culture
Ultra Bioscience water purification systemr	Purelab	Ultra	Ultra water
DMSO	Sigma	D8418	Cell freezing medium
centrifuger	Eppendorf	5427R	DNA and protein extraction
protease inhibitor cocktail	Sigma	P8340	Component of RIPA buffer
PMSF Protease Inhibitor	ThermoFisher Scientific	36978	Component of RIPA buffer
DTT	Sigma	43815	Component of RIPA buffer
EGTA	Sigma	E3889	Component of RIPA buffer
Genomic DNA Purification Kit	Promega	A1125	Genomic DNA extraction
NanoDrop 2000	ThermoFisher Scientific	NanoDrop 2000	Determination of DNA concentration
calf intestinal phosphatase	New England Biolabs	M0290	DNA digestion
DNase I	New England Biolabs	M0303	DNA digestion
snake venom phosphodiesterase I	Sigma	P4506	DNA digestion
Nanosep 3K Omega	Pall	OD003C35	filtration of digested DNA

1290 UHPLC system	Agilent	1290	UHPLC separation
G6410B triple quadrupole mass spectrometer	Agilent	G6410B	MS/MS analysis
Zorbax Eclipse Plus C18 column	Agilent	Zorbax Eclipse Plus	column for UHPLC separation
5-methylcytosine	Solarbio Life Sciences	SM8900	standard 5mC
5-hydroxymethylcytosine (standard)	Toronto Research Chemicals	M295900	standard 5hmC
Prdm14 antibody	bioworld	BS7634	Western blot analysis-primary antibody
Dnmt3a antibody	bioworld	BS6587	Western blot analysis-primary antibody
Dnmt3b antibody	abcam	ab13604	Western blot analysis-primary antibody
Dnmt3l antibody	abcam	ab3493	Western blot analysis-primary antibody
Dnmt1 antibody	abcam	ab13537	Western blot analysis-primary antibody
β -tubulin antibody	bioworld	BS1482MH	Western blot analysis-primary antibody
goat anti-rabbit IgG	abcam	ab6721	Western blot analysis-secondary antibody
goat anti-mouse IgG	abcam	ab6789	Western blot analysis-secondary antibody
Trizol	Invitrogen	15596-026	RNA extraction
reverse transcription system	Promega	A3500	RNA reverse transcription
GoTaq qPCR Master Mix	Promega	A6001	RT-PCR
StemTAG alkaline phosphatase staining and activity assay kit	Cells Biolabs, Inc.	CBA-302	alkaline phosphatase staining analysis
mouse ES cells: WT, 129 SvEv	Provided by Professor Guoliang Xu (Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai, China)		cell strain of mouse ES cells
microscope	Zeiss	LSM510	cells observation
GraphPad Prism 5.0	GraphPad Prism Software Inc.	5.0	statistical analysis