

Materials List for:

# Prediction and Validation of Gene Regulatory Elements Activated During Retinoic Acid Induced Embryonic Stem Cell Differentiation

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## Materials

Name	Company	Catalog Number	Comments
KOD DNA polymerase	Merck Millipore	71085-3	for PCR amplification of enhancer from gDNA
DNeasy Blood & Tissue kit	Qiagen	69504	for genomic DNA isolation
QIAquick PCR Purification kit	Qiagen	28106	for PCR product purification
Gel extraction kit	Qiagen	28706	for gel extraction if there are more PCR product
HindIII	NEB	R3104L	restriction enzyme
BamHI	NEB	R3136L	restriction enzyme
FastAP	Thermo Scientific	EF0651	release of 5'- and 3'-phosphate groups from DNA
T4 DNA ligase	NEB	M0202	for ligation
QIAprep Spin Miniprep kit	Qiagen	27106	for plasmid isolation
DMEM	Gibco	31966-021	ES media
FBS	Hyclone	SH30070.03	ES media
MEM Non-Essential Amino Acid	Sigma	M7145	ES media
Penicillin-Streptomycin	Sigma	P4333	ES media
Beta Mercaptoethanol	Sigma	M6250	ES media
FuGENE HD	Promega	E2311	transfection reagent
Opti-MEM® I Reduced Serum Medium	Life Technologies	31985-062	for transfection
All-trans retinoic acid	Sigma	R2625	ligand, for activation of RAR/RXR
96-well clear plate	Greiner	655101	for Beta galactosidase assay
96-well white plate	Greiner	655075	for Luciferase assay
D-luciferin, potassium salt	Goldbio.com	115144-35-9	for Luciferase assay
ATP salt	Sigma	A7699-1G	for Luciferase assay
MgSO <sub>4</sub> •7H <sub>2</sub> O	Sigma	230391-25G	for Luciferase assay
HEPES	Sigma	H3375-25G	for Luciferase assay
Na <sub>2</sub> HPO <sub>4</sub> •7H <sub>2</sub> O	Sigma	431478-50G	for Beta galactosidase assay
NaH <sub>2</sub> PO <sub>4</sub> •H <sub>2</sub> O	Sigma	S9638-25G	for Beta galactosidase assay
MgSO <sub>4</sub> •7H <sub>2</sub> O	Sigma	230391-25G	for Beta galactosidase assay
KCl	Sigma	P9541-500G	for Beta galactosidase assay
ONPG (o-nitrophenyl-β-D-galactosidase)	Sigma	N1127-1G	for Beta galactosidase assay

TRIzol®	Life Technologies	15596-026	RNA isolation
High-Capacity cDNA Reverse Transcription Kit	Life Technologies	4368814	reverse transcription of eRNA
Rnase-free Dnase	Promega	M6101	Dnase treatment
SsoFast Eva Green	BioRad	750000105	RT-qPCR mastermix
CFX384 Touch™ Real-Time PCR Detection System	BioRad		qPCR machine
BioTek Synergy 4 microplate reader	BioTek		luminescent counter