

Materials List for:

# Isolating, Sequencing and Analyzing Extracellular MicroRNAs from Human Mesenchymal Stem Cells

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## Materials

Name	Company	Catalog Number	Comments
Bone Marrow-Derived Mesenchymal Stem Cells	ATCC	PCS-500-012	Cells used in this protocol was bought from ATCC
MSCGM BulletKit	Lonza	PT-3001	Termed as Mesenchymal Stem Cell Growth Medium (MSC media)
Exosome-depleted FBS	Gibco	A2720801	
ExRNA collecting media: MSCGM but with the FBS replaced by exosome-depleted FBS			
Trypsin-EDTA	Gibco	25200056	
T175 Flask	Sarstedt	833,912	
Penicillin-Streptomycin	Gibco	15140122	
Phosphate Buffered Saline	Sigma	806552	
Ultracentrifuge	Beckman Coulter		
Polycarbonate Bottle with Cap Assembly	Beckman Coulter	355618	
Beckman Coulter Type 60 Ti			Rotor used here
NucleoCounter	Chemometec	NC-3000	Cell Counter
β-glycerophosphate	Calbiochem	35675	Components of the osteogenic differentiation media
Dexamethasone	Sigma	D4902-25MG	Components of the osteogenic differentiation media
2-Phospho-L-ascorbic acid trisodium salt	Sigma	49752-10G	Components of the osteogenic differentiation media
1α,25-Dihydroxyvitamin D3	Sigma	D1530-1MG	Components of the osteogenic differentiation media
miRNeasy Mini Kit	Qiagen	217004	miRNA and total RNA purification kit for step 4.8
Agilent RNA 6000 Pico Kit	Agilent Technologies	5067-1514	Chip-based capillary electrophoresis machine and chips for RNA and DNA analysis
Agilent 2100 Bioanalyzer	Agilent Technologies	G2939BA	Chip-based capillary electrophoresis machine and chips for RNA and DNA analysis
Agilent High Sensitivity DNA Kit	Agilent Technologies	5067-4626	Chip-based capillary electrophoresis machine and chips for RNA and DNA analysis
KAPA Library Quantification Kits	Roche	KK4824	Library quantification kit used here

TruSeq Small RNA Library Prep Kit -Set A (24 rxns) (Set A: indexes 1-12)	Illumina	RS-200-0012	Small RNA library preparation kit used in this protocol - used in step 5
Pippin Prep	Sage Science		Automated DNA gel extractor used in this protocol; manual extraction can be done too
MinElute PCR Purification Kit	Qiagen	28004	PCR purification in step 5.17
FASTX_Toolkit	Cold Spring Harbor Lab		Trimming low-quality reads in step 6
cutadapt			Adaptor removal in step 6
Bowtie			Mapping of clean reads in step 6
Samtools			To make the expression profile in step 6
Bedtools			To make the expression profile in step 6