

Materials List for:

Analysis of Minerals Produced by hFOB 1.19 and Saos-2 Cells Using Transmission Electron Microscopy with Energy Dispersive X-ray Microanalysis

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Materials

Name	Company	Catalog Number	Comments
Reagent			
Ham's DMEM/F12 media mixture	PAA	E15-813	1:1, for human fetus hFOB 1.19 SV40 large T antigen transfected osteoblasts (ATCC CRL-11372)
McCoy's 5A medium	PAA	E82312-0025	for human osteosarcoma Saos-2 cells (ATCC HTB-85)
Antibiotics mixture (penicillin/streptomycin)	Sigma	P0781-100ML	100 U/mL each
G-418	Sigma	68168	0.3 mg/mL
FBS	Gibco	10270	10% for hFOB 1.19 and 15% for Saos-2
AA	Sigma	A-5960	50 µg/mL
β-GP	Sigma	G9422-100G	7.5 mM
Bio-Gel HTP Gel	Bio-Rad	130-0420	for HA
FA			synthesized by us
CA			synthesized by us
Sodium phosphate buffer Na ₂ HPO ₄ /NaH ₂ PO ₄ mixture	Sigma	S7907/S8282	0.1 M, pH 7.2
PBS			pH 7.0, prepared by us
AR-S in PBS	Sigma	A5533-25G	0.5 g/100 mL, pH 5.0
Collagenase type IA	Sigma	C2674	500 U/mL
SCL buffer			prepared by us
Deionized water			produced by us
Ethanol	POCh	BA6480111	absolut 99.8% and solutions 25, 50, 75, 90%
Uranyl acetate in 50% ethanol	Polysciences Inc.	21447-25	0.25 g/10 mL
PD medium			pH 7.4, prepared by us
Fixation mixture (paraformaldehyde/glutaraldehyde)	Sigma	158127/G-6257	3%:1%
Post-fixation OsO ₄	Sigma	75633	1%
LR White resin in ethanol	Polysciences Inc.	17411-MUNC 500g	1:2, 1:1, 100%

Acetone	CHEMPUR	111024800	pure
Tool			
Cryogenic vials	Corning Inc.	430487	1.2 mL
Plastic Petri culture dishes	Falcon	353003	100 mm
Plastic tubes	Falcon	352096 and 352070	15 and 50 mL
Serological pipettes	Falcon and VWR	357521 and 612-3700	1 and 10 mL
Plastic microcentrifuge tubes	Sigma	Z688312 and Z628034	1.5 mL black and 2 mL transparent
Plastic tips	VWR	613-0364, 613-0239 and 613-1050	0.1-10 μ L natural, 1-200 μ L yellow and 200-1000 μ L blue
Plastic racks	Light Labs	A-7055-Z, A-7053-C	green for tubes, orange for micro tubes and blue for TEM probes
Laminar Hera Save	Thermo Scientific Co.	KS12	HEPA filter (H14 according to DIN EN 1822)
Incubators Hera Cell	Thermo Scientific Co.	150	34°C for hFOB 1.19 and 37°C for Saos-2
Fume hood	POLON	WCS-2	for TEM stainings
Glass bottles	SIMAX	1632414501050 and 1632414501100	50 and 100 mL
Quartz glass tubes	SIMAX	638422010100	\varnothing 10 mm, L 100 mm
Pump	IBS Integra Biosciences	VACUSAFE comfort	for vacuum
Oven	Memmert	UNE 400	56°C
Porcelain multi-well plate	Rosenthal technik	229/12	12 wells
Glass beakers	SIMAX	632417010025	25 mL
Glass bottles	Pocord	DIN22	10 mL
Plastic box	Agar Scientific Ltd.		for darkness
Snap Fit Gelatin Capsules	Agar Scientific Ltd.	G3741	size 1
Formvar/Carbon 300 Mesh Ni grids in box	Agar Scientific Ltd.	S162N3	film on the shiny side
Silicon cell scraper	Sigma	SIAL0010-100EA	size 1.8/25 cm
Syringe with needle	BogMark	007	syringe 1 mL 40 U, needle 0.5 x 16
Syringe	Chirana	CH005L	5 mL
Centrifuge	MPW Medical Instruments	MPW-350R	130 x g and 500 x g
UV transluminator	UVP	M-20	for visible and UV light
Ultramicrotome	LKB	NOVA	700Å sections
Block holder	LKB	E6711	round shape
Diamond knife	DiATOME	Ultra 45°	size 3
Eyelash holder			bovine, prepared by us
Forceps	ROTH	2855.1	antistatic for grids
Spatulas set	ROTH	E286.1	antistatic for powders
Imaging			
Inverted Light Microscope	Zeiss with Canon	AxioObserver Z1 equipped with PowerShot G9	Phase contrast, Transmitted light, 20 x objective, RGB filters
Transmission Electron Microscope	TEM Jeol Co. with Oxford Instruments and SiS-Olympus	JEM-1400 TEM equipped with full range INCA Energy Dispersive X-ray microanalysis (EDX) System and 11 Megapixel MORADA G2 camera	magnification 50,000X for TEM and 15,000X for STEM and EDX
Camera body and lenses	Nikon	Nikon D7100 Nikkor AF Micro 105 mm f/2.8D Nikkor AF-S 50 mm f/1.8G	for movie recordings

		Nikkor AF 28 mm f/2.8D	
Microphone	MXL Mics	Tempo	for voice recordings