

Materials List for

# Modeling Primary Bone Tumors and Bone Metastasis with Solid Tumor Graft Implantation into Bone

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## Materials

Name	Company	Catalog Number	Comments
#15 scalpel blade	Henry Schein Ltd.	75614	None
6-well tissue culture plates	Thermo Fisher Scientific	10578911	Used for mincing tumor pieces. Can also be used for cell culture
Abrams osteosarcoma cell line	Not applicable	Not applicable	None
Anesthesia machine with isoflurane vaporiser and oxygen tank(s)	VetEquip	901805	None
Animal weighing scale	Kent Scientific	SCL- 1015	None
BALB/c nude mouse (nu/nu)	Charles River Ltd.	NA	6-8 weeks of age. Male or female mice
Bone cement	Depuy Synthes	160504	Optional use instead of bone wax
Bone wax	Ethicon	W31G	Optional
Buprenorphine	Animalcare Ltd.	N/A	Buprecare 0.3 mg/ml Solution for Injection for Dogs and Cats
Carbon dioxide euthanasia station	N/A	N/A	Should be provided within animal facility
Cell culture incubator set at 37 °C and 5% carbon dioxide	Heraeus	Various	None
Chlorhexidine surgical scrub	Vetoquinol	411412	None
Cryovials (2 ml)	Thermo Scientific Nalgene	5000-0020	Optional if cryopreserving tumor fragments
D-luciferin (Firefly), potassium salt	Perkin Elmer	122799	Optional if cell line of interest has a bioluminescent reporter gene
Digital caliper	Mitutoyo	500-181-30	Can be manual
Digital microradiography cabinet	Faxitron Bioptics, LLC	MX-20	Optional to evaluate bone response to tumor growth
Dimethyl sulfoxide (DMSO)	Sigma Aldrich	1371171000	Optional if cryopreserving tumor fragments
Dulbecco's modified Eagle's medium	Thermo Fisher Scientific	11965092	None
Ethanol (70%)	Sigma Aldrich	2483	None
Fetal bovine serum	Thermo Fisher Scientific	26140079	None

Forceps, Dumont	Fine Science Tools, Inc.	11200-33	None
Freezer (– 80 °C)	Sanyo	MDF-794C	Optional if cryopreserving or snap freezing tumor fragments
Hemocytometer	Thermo Fisher Scientific	11704939	Can also use automated cell counter, if available
Hypodermic needles (27 gauge)	Henry Schein Ltd.	DIS55510	May also use 25G (DIS55509) and 30G (Catalog DIS599) needles
Ice	N/A	N/A	Ideally small pieces in a container for syringe and cell suspension storage
Iris scissors	Fine Science Tools, Inc.	14084-08	None
Isoflurane	Henry Schein Ltd.	1182098	None
IVIS Lumina III bioluminescence/fluorescence imaging system	Perkin Elmer	CLS136334	Optional if cell line of interest has bioluminescent or fluorescent reporter genes
L-glutamine	ThermoFisher scientific	25030081	None
Liquid nitrogen	British Oxygen Corporation	NA	Optional if cryopreserving or snap freezing tumor fragments
Liquid nitrogen dewar, 5 litres	Thermo Fisher Scientific	TY509X1	Optional if cryopreserving tumor fragments
Matrigel® Matrix GFR, LDEV-Free, 5 ml	Corning Life Sciences	356230	Optional. Also available in 10 ml size (354230)
Microcentrifuge	Thermo Fisher Scientific	75002549	Pellet cells at 1200 rpm for 5-6 minutes
Mr. Frosty freezing container	Fisher Scientific	10110051	Optional if cryopreserving tumor fragments
NAIR Hair remover lotion/oil	Thermo Fisher Scientific	NC0132811	Can alternatively use an electric clipper with fine blade
Penicillin/streptomycin	Sigma-Aldrich	P4333	None
Scalpel handle, #7 Short	Fine Science Tools, Inc.	10007-12	User preference as long as it accepts #15 scalpel blade
Small animal heated pad	VetTech	HE006	None
Stereomicroscope	GT Vision Ltd.	H600BV1	None
Sterile phosphate-buffered saline (PBS)	Thermo Fisher Scientific	10010023	Use for injections and also as part of the surgical scrub, alternating with chlorhexidine
Tissue adhesive (sterile)	3M Corporation	84-1469SB	Can alternatively use non-absorbable skin suture (6-0 size)
Trypan blue	Thermo Fisher Scientific	5250061	None
Trypsin-EDTA	Thermo Fisher Scientific	25300054	Use 0.05%-0.25%
Tuberculin syringe (1 ml with 0.1 ml gradations)	Becton Dickinson	309659	Slip tip preferred over Luer
Vented tissue culture flasks, T-75	Corning Life Sciences	CLS3290	Can also use smaller or larger flasks, as needed