

Materials List for:

A Portal Vein Injection Model to Study Liver Metastasis of Breast Cancer

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Materials

Name	Company	Catalog Number	Comments
1 ml Syringe w/ 26-gauge Needle	BD Syringe	309597	For subcutaneous buprenorphine injection; use caution, sharp
Alcohol Prep Pads	Fisher Scientific	06-669-62	For cleaning of abdomen prior to surgical incision
All Purpose Sponges, Sterile	Kendall	8044	4" x 4", use dipped in sterile saline to keep large and small intestines protected and hydrated during surgery
Artificial Tears	Rugby	370114	Mineral oil 15%, white petrolatum 83%; use to protect eyes during surgery
Buprenorphine HCl, 0.3 mg/ml	Mfg. by Reckitt Benckiser	NDC-12496-0757-1	Use at 0.05 - 0.1 mg/kg body weight, 1 - 2x daily for 72 hr, injected subcutaneously
Bupivacaine HCl, 0.5% (5 mg/ml)	Mfg. by Humira Inc	NDC-04091163-01	Use at 0.5%, 1x immediately after surgery, 10 µl injected subcutaneously at incision site
anti-CD45 antibody	BD Pharmingen	550539	Use in multiplex immunofluorescence to exclude leukocytes in identification of metastatic foci
Celox™ Rapid Hemostatic Gauze	Medtrade Products Ltd.	FG08839011	Cut into 5 mm ² pieces, use to stop blood flow out of the portal vein with pressure following injection
Chemical Depilatory			Use to remove hair from surgical area; multiple suppliers
Chlorhexidine, 2% Solution	Vet One	1CHL008	Use caution, do not get chlorhexidine in mucous membranes or ears of the mouse
anti-CK18 antibody	Abcam	ab53118	Use in multiplex immunofluorescence to identify metastatic foci
Cotton Tipped Applicators, Sterile	Fisher Scientific	23-400-114	6" Wooden Shaft 2 pc/envelope
DMEM, High-Glucose	HyClone	SH30243.01	Cell culture media base for use with D2A1, D2.OR, and 4T1 mammary tumor cell lines
Dry Glass Bead Sterilizer			Use between surgeries to sterilize stainless steel tools, use caution, extremely hot; multiple suppliers
Ethanol, 70% solution			Use caution flammable; use to clean surgical area as needed; multiple suppliers
Fetal Bovine Serum	HyClone	SH30071.03	Cell culture media additive for use with D2A1, D2.OR, and 4T1

			mammary tumor cell lines, use at 10% in DMEM high glucose
Gauze, Sterile	Kendall	2146	2" x 2", use dipped in chlorhexidine 2% solution for cleaning of abdomen prior to surgical incision
anti-Green Fluorescent Protein antibody	Vector Laboratories	BA0702	Use to stain for GFP tagged D2A1 or other mammary tumor cell lines
L-Glutamine 200 mM (100x)	Gibco	25030-081	Cell culture media additive for use with D2A1, D2.0R, and 4T1 mammary tumor cell lines, use at 2 mM (1x) in DMEM high glucose
Heating Pad, x 2 - 3			Use to maintain body heat during surgery and recovery; multiple suppliers
Hemocytometer	Hausser Scientific	1483	For use in cell culture to count cells
Hemostatic Forceps			Stainless steel; multiple suppliers
anti-Heppar-1 antibody	Dako	M7158	Use in multiplex immunofluorescence to exclude hepatocytes in identification of metastatic foci
Insulin Syringe, 0.3 ml, 29-gauge	BD	324702	For bupivacaine injection at suture site; use caution, sharp
Isoflurane	Piramal	NDC-66794-017-25	Administered at 2.5%
Isoflurane Vaporizer	VetEquip	911103	Use caution, vaporizes anesthetic gases
Light Source			Use for visualizing the surgical field; multiple suppliers
Neutral buffered formalin, 10%	Anatech Ltd.	135	Use caution, toxic; use as a tissue fixative for metastasis endpoints and assesment of metastatic burden by histology
Opal™ 4-color fIHC kit	PerkinElmer, Inc.	NEL794001KT	Use for multiplex immunofluorescence of Heppar-1/ CD45/CK18 to detect metastases in murine liver
Operating Scissors			Stainless steel; use caution, sharp; multiple suppliers
Penicillin/Streptomycin, 100x	Corning	30-002-CI	Cell culture media additive for use with D2A1, D2.0R, and 4T1 mammary tumor cell lines, use at 1x in DMEM high glucose
Phosphate-buffered Saline			Use at 1x for resuspending tumor cells prior to injection, multiple suppliers
Removable Needle Syringe, 25 µl, Model 1702	Hamilton	7654-01	For portal vein injection; use caution, particularly while working with tumor cell-loaded needles, sharp when needle is attached
Scalpel handle			Stainless steel; multiple suppliers
Scalpel blade, #15			Carbon steel, sterile, size 15; multiple suppliers
Small Hub Removable Needles, 32-gauge	Hamilton	7803-04	For portal vein injection, 1" length, point style 4, 12° angle, 33- to 34-gauge reusable needles can also be used; use caution, particularly while working with tumor cell loaded needles, sharp

Sodium Hypochlorite			Use caution, corrosive; use at 10% to disinfect workspace and surfaces, multiple suppliers
Sterile Saline	Fisher Scientific	BP358-212	0.9% NaCl solution; alternatively, can be homemade and sterile filtered
Surgical Gloves, Sterile			Multiple suppliers
Sutures, Sterile	Ethicon	J310H	4-0 27" coated vicryl w/ 22 mm 1/2c taper ethalloy needle; use caution, sharp
Table Top Portable Anesthesia Machine	VetEquip	901801	Use with isoflurane vaporizer for mouse anesthesia
Thumb Dressing Forceps			Stainless steel, serrated, blunted; multiple suppliers
Towel Drapes, Sterile	Dynarex	4410	18" x 26", to cover heating pad and provide a sterile workspace during surgery
Trypan Blue	Life Technologies	T10282	For use in cell culture to assess viability, use 1:1 with cells in 1x PBS
Trypsin/EDTA, 0.05% (1x)	Gibco	25300-054	Use in cell culture to detach tumor cells from tissue culture plates