

Materials List for:

# Direct Injection of a Lentiviral Vector Highlights Multiple Motor Pathways in the Rat Spinal Cord

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## Materials

Name	Company	Catalog Number	Comments
#10 Scalpel Blades	Roboz	RS-9801-10	For use with the scalpel.
1 mL Syringes	Becton, Dickinson and Company	309659	For anesthetic IP injection, potential anesthetic booster shots, and antibiotic injections.
10mL Syringes	Becton, Dickinson and Company	309604	For injecting saline into the animal, post-surgery.
4.0 Chromic Catgut Suture	DemeTECH	NN374-16	To re-bind muscle during closing.
48000 Micropipette Beveler	World Precision Instruments	32416	Used to bevel the tips of the pulled glass capillary tubes to form functional glass needles.
5% Iodine Solution	Purdue Products L.P.	L01020-08	For use in sterilization of the surgical site.
70% Ethanol	N/A	N/A	For sterilization of newly prepared glass needles, animal models during surgical preparation, and surgeon's hands during surgery, as well as all other minor maintainances of sterility.
Anesthetic (Ketamine/Xylazine Solution)	Zoetis	240048	For keeping the animal in the correct plane of consciousness during surgery.
Antibiotic (Cefazolin)	West-Ward Pharmaceuticals	NPC 0143-9924-90	To be injected subcutaneously to prevent infection post-surgery.
Bead Sterilizer	CellPoint	5-1450	To heat sterilize surgical instruments.
Bonewax	Fine Science Tools	19009-00	To seal up bone in the case of bone bleeding.
Cauterizer	Fine Science Tools	18010-00	To seal any arteries or veins severed during surgery to prevent excessive blood loss.
Digital Scale	Okas	REV.005	For weighing the animal during surgical preparation.
Flexible Needle Attachment	World Precision Instruments	MF34G-5	For cleaning glass needles and loading red oil into glass needles.
Gelfoam	Pfizer	H68079	To seal up bone in the case of bone bleeding.
Glass Capillary Tubes	World Precision Instruments	4878	For pulled glass needles - should be designed for nanoliter injectors.
Hair Clippers	Oster	111038-060-000	For clearing the surgical site of hair.
Hemostats	Roboz	RS-7231	For general use in surgery.
Kimwipes	Kimtech	34155	For general use in surgery.

Medium Point Curved Forceps	Roboz	RS-5136	For general use in surgery.
Micromanipulator with a Vernier Scale	Kanetec	N/A	For precise targeting during surgery.
Microscissors	Roboz	RS-5621	For cutting glass whisps off of freshly pulled glass capillary tubes.
Microscope with Light and Vernier Scale Ocular	Leitz Wetzlar	N/A	Used to visualize and measure beveling of pulled glass capillary tubes into functional glass needles.
MicroSyringe Pump Controller	World Precision Instruments	62403	To control the rate of injection.
Nanoliter 2000 Pump Head Injector	World Precision Instruments	500150	To load and inject virus in a controlled fashion.
Needle Puller	Narishige	PC-100	To heat and pull apart glass capillary tubes to form glass needles.
Ophthalmic Ointment	Dechra Veterinary Products	RAC 0119	To protect the animal's eyes during surgery.
Parafilm	Bemis	PM-996	To assist with loading virus into the nanoinjector.
PrecisionGlide Needles (25G x 5/8)	Becton, Dickinson and Company	305122	For use with the 1mL and 10 mL syringes to allow injection of the animal model.
Rat Tooth Forceps	Roboz	RS-5152	For griping spinous processes.
Red Oil	N/A	N/A	To provide a front for visualization of virus entering tissue during injection.
Retractors	Roboz	RS-6510	To hold open the surgical wound.
Rimadyl Tablets	Bio Serv	MP275-050	For pain management post-surgery.
Rongeurs	Roboz	RS-8300	To remove muscle from the spinal column during surgery.
Scalpel Blade Handle	Roboz	RS-9843	To slice open skin and fat pad of animal model during surgery.
Scissors	Roboz	RS-5980	For general use in surgery.
Stainless Steel Wound Clips	CellPoint	201-1000	To bind the skin of the surgical wound during closing.
Staple Removing Forceps	Kent Scientific	INS750347	To remove the staples, should they be applied incorrectly.
Sterile Cloth	Phenix Research Products	BP-989	To provide a sterile surface for the operation.
Sterile Cotton-Tipped Applicators	Puritan	806-WC	To soak up blood in the surgical wound while maintaining sterility.
Sterile Gauze	Covidien	2146	To clean the surgical area and surgical tools while maintaining sterility.
Sterile Saline	Baxter Healthcare Corporation	281324	For use in blood clearing, and for replacing fluids post-surgery.
Surgical Gloves	N/A	N/A	For use by the surgeon to maintain sterile field during surgery.
Surgical Heating Pad	N/A	N/A	For maintaining the body temperature of the animal model during surgery.
Surgical Microscope	N/A	N/A	For enhanced visualization of the surgical wound.
Surgical Stapler	Kent Scientific	INS750546	To apply the staples.

T/Pump Heat Therapy Water Pump	Gaymar	TP500C	To pump warm water into the water convection warming pad.
Water Convection Warming Pad	Baxter Healthcare Corporation	L1K018	For use in the post-operational recovery area to maintain the body temperature of the unconscious animal.
Weighted Hooks	N/A	N/A	To hold open the surgical wound.