

Materials List for:

Inducing Cre-lox Recombination in Mouse Cerebral Cortex Through *In Utero* Electroporation

Katherine M. Bland^{*1}, Zachary O. Casey^{*1}, Christopher J. Handwerk^{*1}, Z. Logan Holley¹, George S. Vidal¹

¹Department of Biology, James Madison University

*These authors contributed equally

Correspondence to: George S. Vidal at vidalgx@jmu.edu

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Materials

Name	Company	Catalog Number	Comments
C57BL/6J mice	The Jackson Laboratory	#000664	See "1. Mouse set-up" (step 1.1, "wildtype mice")
GFP.Cre empty vector	AddGene	#20781	See "2. DNA set-up" (step 2.1 "single DNA construct that codes for Cre recombinase as well as a fluorescent marker"). GFP.Cre empty vector was a gift from Tyler Jacks.
pK029.CAG-loxP-stop-loxP-RFP-ires-tTA-WPRE (Supernova)	AddGene	#69138	See "2. DNA set-up" (step 2.1 "Supernova" system) and http://snsupport.webcrow.jp/ . pK029.CAG-loxP-stop-loxP-RFP-ires-tTA-WPRE (Supernova) was a gift from Takuji Iwasato.
pK031.TRE-Cre (Supernova)	AddGene	#69136	See "2. DNA set-up" (step 2.1 "Supernova" system) and http://snsupport.webcrow.jp/ . pK031.TRE-Cre (Supernova) was a gift from Takuji Iwasato.
pK038.CAG-loxP-stop-loxP-EGFP-ires-tTA-WPRE (Supernova)	AddGene	#85006	See "2. DNA set-up" (step 2.1 "Supernova" system) and http://snsupport.webcrow.jp/ . pK038.CAG-loxP-stop-loxP-EGFP-ires-tTA-WPRE (Supernova) was a gift from Takuji Iwasato.
EndoFree Plasmid Maxi Kit (10)	Qiagen	#12362	See "2. DNA set-up" (step 2.3 "endotoxin-free plasmid purification kit")
Trypan Blue powder, BioReagent grade	Sigma	T6146-5G	See "2. DNA set-up" (step 2.5 "trypan blue")
Sodium Chloride, ACS, 2.5 kg	VWR	BDH9286-2.5KG	See "2. DNA set-up" (step 2.5 "NaCl")
Potassium Chloride, ACS, 500 g	VWR	#97061-566	See "2. DNA set-up" (step 2.5 "KCl")
Sodium phosphate dibasic, ReagentPlus, 100 g	Sigma-Aldrich	S0876-100G	See "2. DNA set-up" (step 2.5 "Na ₂ HPO ₄ ")
Potassium phosphate monobasic, ReagentPlus, 100 g	Sigma-Aldrich	P5379-100G	See "2. DNA set-up" (step 2.5 "KH ₂ PO ₄ ")
Hydrochloric acid, ACS reagent, 500 mL	Fisher Scientific	A144-500	See "2. DNA set-up" (step 2.5 "HCl")
P-97 Micropipette Puller	Sutter Instrument	P-97	See "3. Pipette set-up" (step 3.1 "glass capillary puller")

3.0 mm wide trough filament	Sutter Instrument	FT330B	See "3. Pipette set-up" (step 3.1 "glass capillary puller")
Thin Wall Glass Capillaries, 4", 1 / 0.75 OD/ID	World Precision Instruments	TW100-4	See "3. Pipette set-up" (step 3.1.1 "glass capillary")
Single Ply Soft-Tech Wipes, 4.5"	Phenix	LW-8148	See "3. Pipette set-up" (step 3.2.1 "single-ply task wipe"); other single-ply wipes (e.g. Kimwipes) can be used.
Graefe Forceps, 7 cm, Straight, 0.7 mm 1x2 Teeth	World Precision Instruments	#14140	See "4. In utero electroporation" (step 4.1 "Graefe forceps")
Iris Scissors, 11.5 cm, Straight, 12-pack	World Precision Instruments	#503708-12	See "4. In utero electroporation" (step 4.1 "iris scissors")
Hartman Mosquito Forceps, 9 cm, Straight, 12-pack	World Precision Instruments	#503728-12	See "4. In utero electroporation" (step 4.1 "Hartman mosquito forceps")
General Purpose Non-Woven Sponges, 2" x 2", 4-ply	Medrepxpress	#2204-c	See "4. In utero electroporation" (step 4.1 "non-woven gauze sponges")
Ring Tipped Forceps, 10 cm, Straight, 2.2mm ID	World Precision Instruments	#503203	See "4. In utero electroporation" (step 4.1 "ring-tipped forceps")
Pyrex petri dishes complete, O.D. x H 100 mm x 20 mm	Sigma-Aldrich	CLS3160102-12EA	See "4. In utero electroporation" (step 4.1 "Petri dishes")
Flat Type Instrument Tray, Stainless Steel, 13-5/8" x 9-3/4" x 5/8"	Amazon	B007SHGAHA	See "4. In utero electroporation" (step 4.1 "stainless steel tray")
Platinum Tweezertrode, 5 mm	BTX	#45-0489	See "4. In utero electroporation" (step 4.3 and 4.16 "tweezer-type electrodes")
ECM 830 Foot Pedal	BTX	#45-0211	See "4. In utero electroporation" (step 4.3 and 4.17 "foot pedal")
ECM 830 Generator	BTX	#45-0052	See "4. In utero electroporation" (step 4.3 "generator")
Single Animal Isoflurane Anesthesia System with Small Induction Box	Harvard Apparatus	#72-6468	See "4. In utero electroporation" (step 4.4 and 4.6 "nose cone", step 4.4 "induction chamber")
Ophthalmic ointment	Hanna Pharmaceutical Supply Co	#0536108691	See "4. In utero electroporation" (step 4.7 "veterinary ophthalmic ointment")
Space Gel (AIMS)	VWR	#95059-640	See "4. In utero electroporation" (step 4.8 "sealed pouch filled with supersaturated salt solution")
Hair Remover Gel Cream, Sensitive Formula	Veet	#062200809951	See "4. In utero electroporation" (step 4.9 "depilatory cream")
10ul Low Retention Tip Starter (960 tips/pk)	Phenix Research Products	TSP-10LKIT	See "4. In utero electroporation" (step 4.12 "sterile 10 µL micropipette tip")
Aspirator tube assemblies for calibrated microcapillary pipettes	Sigma-Aldrich	A5177	See "4. In utero electroporation" (step 4.15 "aspirator tube assembly")

Braided Absorbable Suture, 4-0, Needle NFS-2(FS-2), 27"	Medrepress	MV-J397	See "4. In utero electroporation" (step 4.19 "absorbable sutures")
"LiquiVet Rapid" Tissue Adhesive	Medrepress	VG3	See "4. In utero electroporation" (step 4.20 "tissue adhesive")
Hypodermic syringes, polypropylene, Luer lock tip, capacity 1.0 mL	Sigma-Aldrich	Z551546-100EA	See "4. In utero electroporation" (step 4.21 "1 mL syringe")
BD Precisionglide syringe needles gauge 26, L 1/2 in.	Sigma-Aldrich	Z192392-100EA	See "4. In utero electroporation" (step 4.21 "26G, 1/2" needle")
Nestlets Nesting Material	Ancare	NES3600	See "4. In utero electroporation" (step 4.24 "nesting materials")
Sunflower Seeds, Black Oil, Sterile	Bio-Serv	S5137	See "4. In utero electroporation" (step 4.24 "sunflower seeds")
Paraformaldehyde, 97%	Alfa Aesar	A11313	See "5. Histology" (step 5.1.1 "PFA")
Economy Tweezers #3, 11 cm, 0.2 x 0.4 mm tips	World Precision Instruments	#501976	See "5. Histology" (step 5.5 "tweezers")
Agar powder	Alfa Aesar	#10752	See "5. Histology" (step 5.8.1 "agar")
Single-edge razor blades, #9 blade	Stanley Tools	#11-515	See "5. Histology" (step 5.9 "single-edge razor blade")
Specimen disc S D 50 mm	Leica	#14046327404	See "5. Histology" (step 5.9 "vibrating microtome specimen disc")
Buffer tray S assembly	Leica	#1404630132	See "5. Histology" (step 5.10 "buffer tray")
VT1000 S Vibratome	Leica	#14047235612	See "5. Histology" (step 5.10 "vibrating microtome")
Double Edge Razor Blades	Personna	BP9020	See "5. Histology" (step 5.10 "blade")
Knife Holder S	Leica	#14046230131	See "5. Histology" (step 5.10 "knife holder")
Studio Elements Golden Taklon Short Handle Round Brush Set	Amazon	B0089KU6XE	See "5. Histology" (step 5.12.1 "fine tipped paintbrush")
Superfrost Plus Slides	Electron Microscopy Services	#71869-11	See "5. Histology" (step 5.12.1 "microscope slide")
ProLong Diamond Antifade Mountant, 10 ml	Thermofisher	P36970	See "5. Histology" (step 5.12.3-5.12.4 "mountant")
Cover Glass, 24 x 50 mm, No. 1	Phenix Research Products	MS1415-10	See "5. Histology" (step 5.12.4 "coverslip")
4',6-Diamidino-2-phenylindole dihydrochloride (DAPI)	Sigma-Aldrich	D9542	See "5. Histology" (step 5.13.1 "DAPI")
Fixed Stage Upright Microscope	Olympus	BX51WI	See "5. Histology" (step 5.15 "light microscope")
Laser Scanning Confocal Microscope	Nikon	TE2000/C2si	See "5. Histology" (step 5.15 "confocal microscope")
4x objective, NA = 0.20	Nikon	CFI Plan Apo Lambda 4X	See "5. Histology" (step 5.15 "low-power objective")
20x objective, NA = 0.75	Nikon	CFI Plan Apo Lambda 20X	See "5. Histology" (step 5.15 "medium-power objective")

60x objective, NA = 1.40	Nikon	CFI Plan Apo VC 60X Oil	See "5. Histology" (step 5.15 "high-power objective")
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