

Mouse *In Vivo* Placental Targeted CRISPR Manipulation

Annemarie J. Carver^{1,2,3}, Robert J. Taylor^{2,3}, Hanna E. Stevens^{1,2,3,4}

¹Interdisciplinary Graduate Program in Genetics, University of Iowa ²Department of Psychiatry, Carver College of Medicine, University of Iowa ³Iowa Neuroscience Institute, Carver College of Medicine, University of Iowa ⁴Hawk-IDDRC, University of Iowa

Corresponding Author

Hanna E. Stevens
hanna-stevens@uiowa.edu

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Materials

Name	Company	Catalog Number	Comments
1.5 ml Tubes	USA Scientific Inc	1615-5500	
4% Paraformaldehyde (PFA) in PBS	Thermo Fisher Scientific	J61899.AP	
96 Well plate	Corning	3598	For BCA kit
Absorbent Underpads	Fisher Scientific	14-206-62	
Activation Control Plasmid	Santa Cruz Biotechnology	sc-437275	Dnase-free water provided for dilution
AMV Reverse Transcriptase	New England Biolabs	M0277L	Use for cDNA synthesis
Anesthetic Gas Vaporizer	Vetamac	VAD-601TT	VAD-compact vaporizer
Artificial Tear Gel	Akorn	NDC 59399-162-35	
BCA Protein Assay Kit	Thermo Fisher Scientific	23227	Protein quantification
Biovortexer	Bellco Glass, Inc.	198050000	Hand-held tissue homogenizer
CellSens Software	Olympus	V4.1.1	Image processing to FISH images.
Centrifuge 5810	Eppendorf	EP022628168	Plate centrifuge
Chloroform	Thermo Fisher Scientific	J67241-AP	RNA isolation
Cotton Tipped Applicators	ProAdvantage	77100	Sterilize before use
CRISPR/Cas9 Control Plasmid	Santa Cruz Biotechnology	sc-418922	Dnase-free water provided for dilution
CryoStat	Leica	CM1950	
Dissection Microscope	Leica	M125 C	Used for post-necropsy imaging
Dissolvable Sutures	Med Vet International	J385H	
Distilled Water	Gibco	15230162	
Dulbecco's Phosphate Buffered Saline (DPBS)	Thermo fisher Scientific	14190144	(-) Calcium; (-) Magnesium
ECM 830 Electro Electroporator (Electroporation Machine)	BTX Harvard Apparatus	45-0662	Generator only
Electric Razor	Wahl	CL9990	Kent Scientific
Electroporation paddles/ Tweezertrodes	BTX Harvard Apparatus	45-0487	3 mm diameter paddles; wires included
Embedding Cassette: 250 PK	Grainger	21RK94	Placenta embedding cassettes
Ethanol	Thermo Fisher Scientific	268280010	
F-Air Canisters	Penn Veterinary Supply Inc	BIC80120	Excess isoflurane filter

Fast Green Dye FCF	Sigma	F7252-5G	Dissolve to 1 µg/ml and filter; protect from light
Filter-based microplate photometer (plate reader)	Fisher Scientific	14377576	Can be used for BCA and ELISA
Forceps	VWR	82027-386	Fine tips, straight, serrated
Formalin solution, neutral buffered, 10%	Sigma Aldrich	HT501128	
Glass Capillaries - Borosilicate Glass (Micropipette)	Sutter Instrument	B150-86-10	O.D.: 1.5 mm, I.D.: 0.86 mm, 10 cm length
Halt Protease and Phosphatase inhibitor cocktail (100x)	Thermo Scientific	1861281	Protein homogenization buffer
Heating Pad	Thermotech	S766D	Digital Moist Heating Pad
Hemostats	VWR	10806-188	Fully serrated jaw; curved
Hot Water Bath	Fisher Scientific	20253	Isotemp 205
Igf-1 SAM Plasmid (m1)	Santa Cruz Biotechnology	sc-421056-ACT	Dnase-free water provided for dilution
Induction Chamber	Vetamac	941443	No specific liter size required
Isoflurane	Piramal Pharma Limited	NDC 66794-013-25	
Isoproponal/2-Proponal	Fisher Scientific	A451-4	RNA isolation
Ketamine HCl 100mg/ml	Akorn	NDC 59399-114-10	
MgCl ₂ /Magnesium Chloride	Sigma Aldrich	63069-100ML	1M. Protein homogenization buffer
MicroAmp™ Optical 384-Well Reaction Plate with Barcode	Fisher Scientific	4309849	Barcoded plates not required
Microcapillary Tip	Eppendorf	5196082001	Attached to BTX Microinjector
Microinjector	BTX Harvard Apparatus	45-0766	Stainless Steel Pipette Holder, 130 mm Length, for 1 to 1.5 mm Pipettes
Microject 1000A (Injection Machine)	BTX Harvard Apparatus	45-0751	MicroJect 1000A Plus System
Micropipette Puller Model P-97	Sutter Instrument	P-97	Flaming/Brown type micropipette puller
Microplate Mixer (Plate Shaker)	scilogex	822000049999	
Mouse/Rat IGF-I/IGF-1 Quantikine ELISA Kit	R & D Systems	MG100	
Needles	BD - Becton, Dickson, and Company	305106	30 Gx 1/2 (0.3 mm x 13 mm)
Nitrogen Tank	Linde	7727-37-9	Any inert gas
Non-Steroidal Anti-Inflammatory Drug (NSAID)	Norbrook Laboratories Limited	NDC 55529-040-10	Analesgic such as Meloxicam
Nose Cone	Vetamac	921609	9-14 mm
Opal 620 detection dye	Akoya Biosciences	SKU FP1495001KT	Used for FISH
Optimal Cutting Temperature (O.C.T) Compound	Sakura	4583	
Oxygen Tank	Linde	7782 - 44 - 7	Medical grade oxygen
Pestles	USA Scientific Inc	14155390	
Povidone-Iodine Solution, 5%	Avrio Health L.P.	NDC 67618-155-16	
Power SYBR™ Green PCR Master Mix	Thermo Fisher Scientific	4367659	Use for qPCR
Random Hexamers (Random Primers)	New England Biolabs	S1330S	Use for cDNA synthesis
Razor Blade	Grainger	26X080	
RNA Cleanup Kit & Concentrator	Zymo Research	R1013	
RNALater	Thermo Fisher Scientific	AM7021	
RNAscope kit v.2.5	Advanced Cells Diagnostics	323100	Contains all reagents required for fluorescent in situ hybridization. Probes sold separately.

RNAscope™ Probe- Mm-Prl8a8-C2	Advanced Cells Diagnostics	528641-C2	
RNAscope™ Probe- Vector-dCas9-3xNLS-VP64	Advanced Cells Diagnostics	527421	
Roto-Therm Mini	Benchmark	R2020	Dry oven for in situ hybridization
Scissors	VWR	82027-578	Dissecting Scissors, Sharp Tip, 4 1/2"
Sodium Chloride (Saline)	Hospira	NDC 0409-4888-03	Sterile, 0.9%
Sodium Citrate, Trisodium Salt, Dihydrate, [Citric Acid, Trisodium Dihydrate]	Research Product International	03-04-6132	
Sodium Hydroxide 1N Concentrate, Fisher Chemical	Fisher Scientific	SS277	Protein homogenization buffer
Steamer	Bella	B00DPX8UBA	
Sterile Surgical Drape	Busse	696	Sterilize before use
Superfrost Plus Microscope Slides	Fisher Scientific	12-550-15	
Surgipath Cover Glass 24x60	Leica	3800160	
Syringes	BD - Becton, Dickson, and Company	309659	BD Luer Slip Tip Syringe sterile, single use, 1 mL
Thermo Scientific™ Invitrogen™ Nanodrop™ One Spectrophotometer with WiFi and Qubit™ 4 Fluorometer	Fisher Scientific	13-400-525	This configuration comes with Qubit 4 fluorometer. Qubit quantification not required.
Tissue Adhesive	3M	1469SB	VetBond
Tris HCl	Thermo Fisher Scientific	15568025	1M. Protein homogenization buffer
TRIzol™ Reagent	Thermo Fisher Scientific	15596018	RNA isolation
TSA Buffer Pack	Advanced Cells Diagnostics	322810	Used to dilute Opal 620 detection dye
Universal F-Circuit	Vetamac	40200	Attached to vaporizer and vaporizer accessories
Upright Compound Fluorescence Microscope	Olympus	BX61VS	Used for FISH imaging
Vectorshield with DAPI	Vector Laboratories	H-1200	Coverslip mounting media
ViiA™ 7 Real-Time PCR System with 384-Well Block	Thermo Fisher Scientific	4453536	This is for SYBR 384-well block detection. TaqMan and/or smaller blocks available
Wet n Wild Nail Polish Wild Shine, Clear Nail Protector, Nail Color	Amazon	C450B	
Xylazine 20mg/ml	Anased	343730_RX	