

# Analyzing the Parkinson's Disease Mouse Model Induced by Adeno-associated Viral Vectors Encoding Human $\alpha$ -Synuclein

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jove.com/video/63313

## Materials

Name	Company	Catalog Number	Comments
<b>ANIMALS AND ANIMAL FOOD</b>			
Foxp3-GFP C57BL/6 mice	The Jackson Laboratory (Bar Harbor, ME)	Stock No: 023800	
Laboratory Rodent Diet	LabDiet	Rodent Diet 5001	Standard Rodent diet
Wild-type C57BL/6 mice	The Jackson Laboratory (Bar Harbor, ME)	Stock No: 000664	
<b>VIRAL VECTORS</b>			
AAV5-CBA- $\alpha$ Syn	University of Iowa Viral Vector Core Facility	N/A	Stock concentration at 10E13 vg/mL
AAV5-CBA-eGFP	University of Iowa Viral Vector Core Facility	N/A	Stock concentration at 9.5 x 10E12 vg/mL
<b>ANESTHETICS AND ANALGESICS</b>			
Isoflurane	Baxter	218082	1% for stereotaxic surgery
Ketamine	Drag Pharma	CHE30	70 mg/Kg for stereotaxic surgery
Sevoflurane	Baxter	VE2L9117	For before transcatheter perfusion
Tramadol	Drag Pharma	DPH134	30 mg/Kg every 24 h
Xylazine	Centrovvet	EHL40	9 mg/kg for stereotaxic surgery
<b>EQUIPMENT</b>			
Beam test	Home made	N/A	horizontal beam 25 cm length and 3 cm width. The beam surface was covered by a metallic grid (1 cm <sup>2</sup> ).
Cryostat	Leica	CM1520	
Digital camera	Nikon	S2800 Coolpix	For recording the beam test performance
Microscope	Olympus	BX51	Used for IHC analysis (section 4.4)

Microscope	Olympus	IX71	Used for IF analysis (section 5.3)
Microscope	Leica	DMI8	Used for IF analysis (section 5.7)
New Standard Stereotaxic, mouse	Stoelting, Wood Dale, IL, USA	51500	stereotaxic frame for surgery
Peristaltic Pump	Masterflex	C-flex L/S16	
Power supply unit	Olympus	U-RFL-T	Used for IF analysis (section 5.3)
Surgical suture	Sylkam®, B Braun	C0760171	
Syringe 100 U	BD	324918	For anesthesia before transcardial perfusion, 29G needle
Syringe RN 5uL SYR W/O NEEDLE	Hamilton	HA-7641-01	For viral vector inoculation
<b>BUFFERS AND REAGENTS</b>			
Avidin, Peroxidase Conjugate	Merck, Darmstadt, Germany	189728	
Bovine Serum Albumin	Merck, Darmstadt, Germany	9048-46-8	
Cryoprotection buffer	Home made	N/A	20% glycerine and 2% DMSO in PBS
DAPI	Abcam	ab228549	
Diaminobenzidine	Merck, Darmstadt, Germany	D8001	
Fluoromount -G T	Electron Microscopy Science	17984-25	
Gelatin	Merck, Darmstadt, Germany	104078	
Normal goat serum	Jackson ImmunoResearch Laboratory	5000121	
Paraformaldehyde	Merck, Darmstadt, Germany	104005	
PBS	Home made	N/A	0.125 M, pH 7.4
Peroxidase inactivating buffer	Home made	N/A	0.03% H <sub>2</sub> O <sub>2</sub> in methanol
Triton X-100	Sigma-Aldrich	9036-19-5	
Trizma Hydrochloride	Merck, Darmstadt, Germany	1185-53-1	
Tween 20	Sigma-Aldrich	822184	
<b>ANTIBODIES</b>			
Biotin-SP (long spacer) AffiniPure Goat Anti-Rabbit IgG (H+L)	Jackson ImmunoResearch Laboratory	111065003	
Goat anti-Rabbit IgG (H+L) Alexa Fluor 546	ThermoFisher Scientific	A11010	
Goat anti-Rabbit IgG (H+L) Alexa Fluor 647	ThermoFisher Scientific	A21244	
Goat anti-Rat IgG (H+L) Alexa Fluor 546	ThermoFisher Scientific	A11081	
Rabbit monoclonal anti-alpha-Synuclein	Abcam	ab138501	
Rabbit monoclonal anti-Iba-1	Abcam	EPR16588	
Rabbit polyclonal anti-Tyrosine Hydroxylase	Millipore	AB152	
Rat monoclonal anti-CD4	Biologend	100402	
<b>SOFTWARES</b>			
GraphPad	Prism	6.0	Fos stats analysis
ImageJ	National Institute of Health	N/A	For image analysis
LAS X	Leica	N/A	For image capture with Leica microscope
ProgRes Capture Pro	Jenoptik	N/A	For image capture with Olympus microscope
VLC media player	VideoLAN Organization	N/A	For analysis of behavioural tests