

Injection location	Location of Projection Neurons	Labeling efficiency	Viral transgene	Mouse background
mouse mPFC (IL/PL)	MEC	strong	Cre	ROSA26-LSL-H2B-GFP
mouse mPFC (IL/PL)	LEC	strong	Cre	ROSA26-LSL-H2B-GFP
mouse mPFC (IL/PL)	contra mPFC	strong	Cre	ROSA26-LSL-H2B-GFP
mouse mPFC (IL/PL)	mediodorsal thalamus	moderate	Cre	ROSA26-LSL-H2B-GFP
mouse mPFC (IL/PL)	insular cortex	strong	Cre	ROSA26-LSL-H2B-GFP
mouse mPFC (IL/PL)	hippocampus- ventral CA1	strong	Cre	ROSA26-LSL-H2B-GFP
mouse mPFC (IL/PL)	AcG	strong	Cre	ROSA26-LSL-H2B-GFP
OFC	MEC	strong	Cre	ROSA26-LSL-H2B-GFP
OFC	LEC	Strong	Cre	ROSA26-LSL-H2B-GFP
OFC	contra OFC	strong	Cre	ROSA26-LSL-H2B-GFP
OFC	insular cortex	strong	Cre	ROSA26-LSL-H2B-GFP
OFC	hippocampus- ventral CA1	moderate	Cre	ROSA26-LSL-H2B-GFP
dorsal CA1	MEC	strong	Cre	ROSA26-LSL-H2B-GFP
dorsal CA2	LEC	strong	Cre	ROSA26-LSL-H2B-GFP
dorsal CA3	CA3	weak	Cre	ROSA26-LSL-H2B-GFP
dorsal CA4	nucleus reuniens of thalamus	weak	Cre	ROSA26-LSL-H2B-GFP
amygdala	mPFC	strong	Cre	ROSA26-LSL-H2B-GFP
lateral hypothalamus	mPFC	strong	Cre	ROSA26-LSL-H2B-GFP
dorsomedial striatum	mPFC	strong	Cre	ROSA26-LSL-H2B-GFP
NAcc	mPFC	strong	Cre	ROSA26-LSL-H2B-GFP
MEC	mPFC	moderate	FLPo	RCE:dual
mPFC	ventral CA1	moderate	FLPo	RCE:dual
mPFC	MEC	moderate	FLPo	RCE:dual
subiculum	nucleus accumbens	moderate	Cre	ROSA26-LSL-H2B-GFP
subiculum	ventral hippocampus	strong	Cre	ROSA26-LSL-H2B-GFP
subiculum	retrosplenial cortex	strong	Cre	ROSA26-LSL-H2B-GFP
subiculum	lateral entorhinal cortex	strong	Cre	ROSA26-LSL-H2B-GFP
subiculum	medial entorhinal cortex	strong	Cre	ROSA26-LSL-H2B-GFP
superior colliculus	layer 5 in visual cortex	very weak	GCaMP6s	wt
superior colliculus	layer 5 in visual cortex	very weak	Cre	Ai94
superior colliculus	layer 5 in visual cortex	strong	Cre	wt + in situ
AAV2/1-FLEX-GCaMP6s				
dLGN	layer 6 in visual cortex	very weak	GCaMP6s	ROSA26-LSL-H2B-GFP
dLGN	layer 6 in visual cortex	very weak	Cre	Ai94
dLGN	layer 6 in visual cortex	strong	Cre	wt + in situ
AAV2/1-FLEX-GCaMP6s				

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visual cortex	contralateral visual cortex	strong	Cre	ROSA26-LSL-H2B-GFP
visual cortex	contralateral visual cortex	strong	GFP	wt
visual cortex	contralateral visual cortex	weak	GCaMP6s	wt
visual cortex	contralateral visual cortex	strong	tdTomato	wt
visual cortex	LGN	strong	tdTomato	wt
visual cortex	claustrum	strong	tdTomato	wt
visual cortex	cingulate	moderate	tdTomato	wt
visual cortex	LM	strong	tdTomato	wt
dorso-lateral striatum	M1	strong	tdTomato	wt
dorso-lateral striatum	M1	moderate	GFP	wt
dorso-lateral striatum	M2	strong	tdTomato	wt
dorso-lateral striatum	somatosensory cortex	strong	tdTomato	wt
dorso-lateral striatum	basolateral amygdala	strong	tdTomato	wt
dorso-lateral striatum	insular cortex	strong	tdTomato	wt
dorso-lateral striatum	entorhinal cortex	strong	tdTomato	wt
dorso-lateral striatum	Globus Pallidus	moderate	tdTomato	wt
dorso-lateral striatum	thalamus	moderate	tdTomato	wt
dorso-lateral striatum	intralaminar thalamic nuclei	strong	GFP	wt
dorso-lateral striatum	raphe nucleus	very weak	tdTomato	wt
dorso-lateral striatum	VTA	very weak	tdTomato	wt
basolateral amygdala	taste cortex	strong	flex-tdTomato	Vglut-Cre
forelimb motor cortex	motor thalamus	weak	GFP	wt
nucleus tractus solitarius	lateral amygdala	moderate	tdTomato	wt
spinal cord	cortex	strong	flex-tdTomato	Rbp4-Cre
spinal cord	cortex	strong	GFP	wt
spinal cord, lamina IX	spinal cord: presynaptic inhibitory neurons	strong	flex-tdTomato	GAD2-Cre
muscle	spinal motor neurons	moderate	Cre	ROSA26-LSL-tdTomato
muscle	proprioceptor neurons	moderate	Cre	ROSA26-LSL-tdTomato

Tervo et al., Table S2