

Mouse models have been widely used to study differentiation and aging of neural cells, generation of neural circuits and synapses, roles of gliocytes in nervous system, occurrence of nervous system disorders. We have developed a repository of research-ready mouse models applied to these fundamental research in nervous system.

Brain Cells Typing

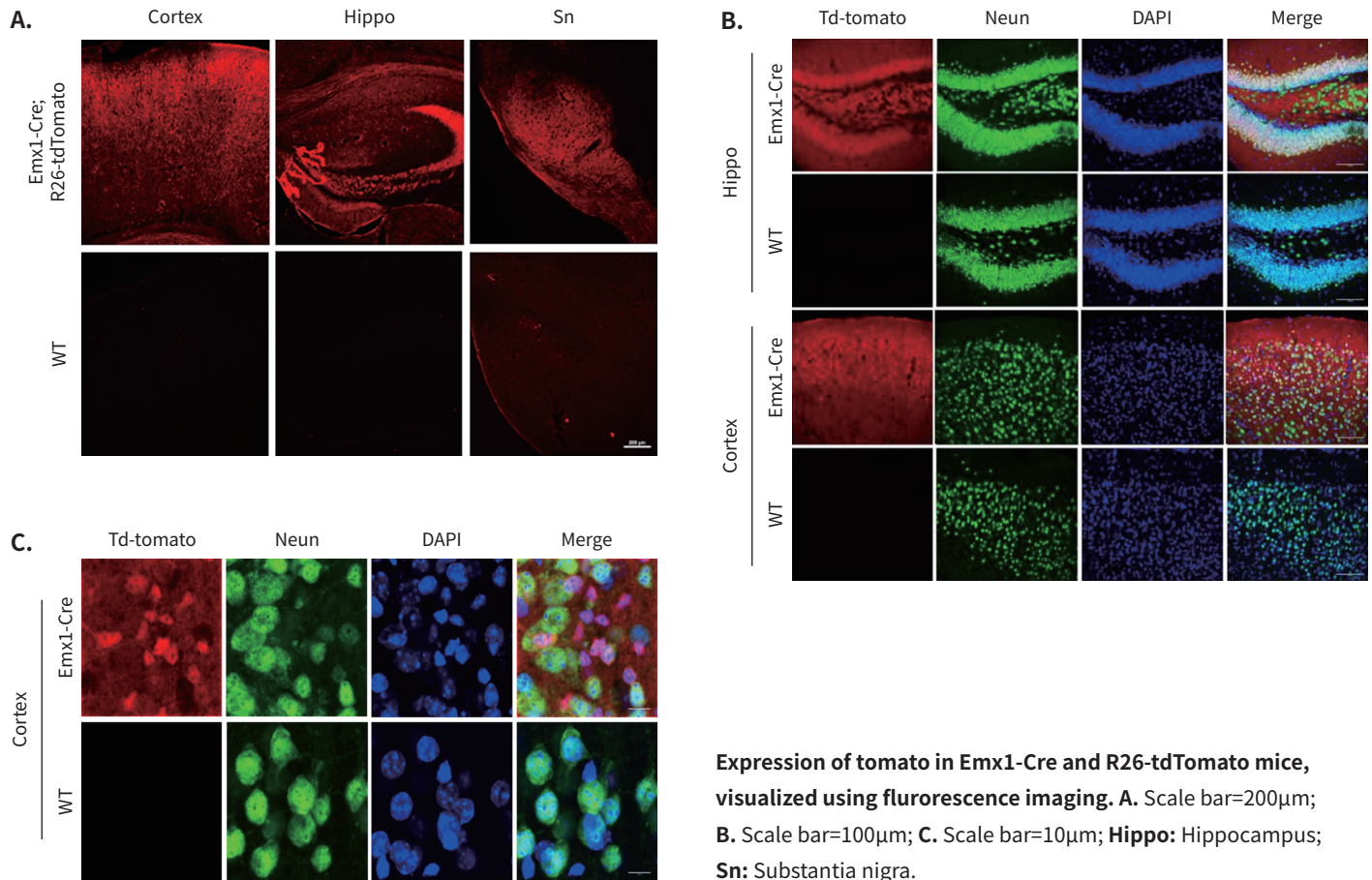
Brain cells typing is critical for in-depth research of associated molecular mechanism, which requests highly reliable mouse models. By insertion of Cre/Dre into specific marker genes, we have developed mouse models broadly used to define, mark and type different brain cells, and study cell type-specific molecular mechanism.

Strain Name: Emx1-IRES-Cre

Catalog No.: NM-KI-200149

Strain State: Repository live

Application: Brain cells typing



If you want to learn more about this strain, just contact us at service.us@modelorg.com.

Part of representative mouse models are listed as follows. For more strains, please contact us at service.us@modelorg.com.

SMOC Catalog NO.	SMOC Strain Names	Applications	Type-specific Cells
NM-KI-200012	Eno2-2A-Cre	Cre driver mouse	Mature neuron
NM-KI-200011	Eno2-2A-CreERT2	Cre driver mouse	Mature neuron
NM-KI-200010	Mnx1-IRES-Cre	Cre driver mouse	Motor neuron
NM-KI-190126	Trpm8-2A-Cre	Cre driver mouse	TRPM8-expressing sensory neuron
NM-KI-190091	Sst-IRES-Cre	Cre driver mouse	SST-expressing neuron
NM-KI-190011	Slc17a6-CreERT2	Cre driver mouse	Excitatory glutamatergic neuron
NM-KI-18016	Drd1-2A-CreERT2	Cre driver mouse	Dopaminergic neuron
NM-KI-200101	Arc-CreERT2	Cre driver mouse	Arc-expressing neuron
NM-KI-200098	Pvalb-2A-Cre	Cre driver mouse	PV-expressing neuron
NM-KI-200110	Fos-CreERT2	Cre driver mouse	Fos-expressing neuron
NM-KI-200131	Cck-IRES-Cre	Cre driver mouse	Cck-expressing neuron
NM-KI-200149	Emx1-IRES-Cre	Cre driver mouse	Cerebral cortex and hippocampus neuron

Research of Neural Circuits

Optogenetics and chemical genetics are commonly used to study neural circuits. SMOC has constructed mouse strains applied to optogenetic or chemical genetic manipulation of target genes in different neurons through site-specific knock-in of Chr2-H134R, hM3Dq and hM4Di. Part of representative models are presented as follows. For more strains, please contact us at service.us@modelorg.com.

Genes Knocked in	SMOC Catalog. NO	SMOC Strain Names	Strain State
Chr2-H134R	NM-KI-190113	R26-CAG-LSL-ChR2-H134R-tdTomato	Repository Live
hM4Di	NM-KI-190093	R26-CAG-LSL-GiDREADD(hM4Di)-2A-mCitrine	Embryo cryopreservation
hM3Dq	NM-KI-190106	R26-CAG-LSL-GqDREADD(hM3Dq)-2A-mCitrine	Embryo cryopreservation

Study of Nervous System Disorders

Based on our versatile technical platforms, we are providing a repository of mouse strains for study of nervous system disorders, such as, Alzheimer's disease(AD), Parkinson's disease(PD) and avoidant personality disorder(ASD). Part of disease models are presented as follows. For more strains, please contact us at service.us@modelorg.com.

Applications	Gene Targets	SMOC Catalog NO.	SMOC Strain Names
AD Research	Trem2	NM-HU-2000083	hTREM2
	Trem2	NM-KO-190402	Trem2-KO
	Trem2	NM-CKO-190063	Trem2-Flox
	Trem2	NM-KI-210225	Trem2-R62H
	Trem2	NM-KI-190092	Trem2-R47H
PD Research	Snca	NM-KO-190380	Snca-KO
	Snca	NM-KI-200320	R26-CAG-LSL-hSNCA*A53T-IRES-EGEP
	Lrrk2	NM-KO-190985	Lrrk2-KO
	Lrrk2	NR-KO-210148	Lrrk2-KO(SD)
	Lrrk2	NM-CKO-2112960	Lrrk2-Flox
	Prkn	NM-KO-191005	Prkn-KO(2)
	Prkn	NM-KO-190335	Prkn-KO
	Prkn	NM-CKO-200267	Prkn-Flox
ASD Research	Mapk10	NM-KO-190987	Mapk10-KO
	Skp1a	NM-KO-191031	Skp1a-KO
	Mecp2	NM-CKO-190001	Mecp2-Flox
	Nlgn3	NM-KI-200286	Nlgn3-R451C
	sh3rf2	NM-KO-190449	sh3rf2-KO
	Gabra4	NM-KO-190572	Gabra4-KO
	Cntnap2	NM-KO-200932	Cntnap2-KO

Want to learn more SMOC products applied to neuroscience research? Contact us at service.us@modelorg.com.

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