

Model repositories and vendors

Name	Acronym	Website	Country
Repository			
Rat Resource Center	RRC	http://www.rrrc.us/search/?strainStatus=available	USA
National BioResource Project	NBRP	http://www.anim.med.kyoto-u.ac.jp/NBR/strainsx/Strains_list.aspx	Japan
Rodent Model Resource Center	RMRC	http://www.nlac.org.tw/RMRC/webe/html/data/index.aspx	Taiwan
Rat Resource Database	-	http://ratresource.com/page87	China
Vendor			
Envigo	-	https://www.envigo.com/research-models	USA

Abbreviations: L, Live ; CP, cryopreserved

Characterized Cre rat models

System /Tissue	Promoter /Gene	Model name Strain.Tg(promoter- Cre) KI Strain.locus(Cre)	Phenotype specificity	Refe/ Donor	Repository ID# /vendor	L/CP
Ubiquitous	CAG	W1STAR.Tg(CAG-Cre)-Gc/ILAS	Ubiquitous Cre	[1]	Ratresource.com #GC00179	L
	CAG	W-Tg(CAG-cre)81Jmsk	Ubiquitous Cre mostly in skeletal muscles	[2,3]	NBRP #283	L
	CAG	Wistar-Tg(CAG-Ncre)81Jmsk	Ubiquitous Cre	[2]	RRC #301	L
	Wfs1	KI SD.wfs1(tm- Cre)-GC/ILAS	Ubiquitous Cre	[1]	Ratresource.com #GC00073	-
Nervous system	5Ht3a	KI HsdSage:LE-5HT3a ^{tm1(T2A-Cre)Sage}	5Ht3a positive serotonergic neurons		Envigo	L
	Adora2	KI LE-Adora2a ^{em1(iCre)Berke}	Striatum Adora2 cells	[4]	RRC #857	L
	CamK2	KI HsdSage:LE-CAMKIIA ^{tm1(IRES-Cre)Sage}	excitatory neurons		Envigo	L
	CCK	KI CCK(Cre)	Hippocampus	[5]	-	-
	Chat	LE-Tg(Chat-Cre)5.1Deis	Cholinergic neurons	[6]	RRC #658	L
	Crh	W-Tg(Crh-cre)Msg	Corticotropin releasing factor expressing neurons	[7]	RRC #852	L
	DAT	LE-Tg(DAT-iCre)6Ottc	Dopamin neurons	[8,9]	RRC #758 (Previously #730)	CP
	KI- HsdSage:SD-Slc6a3tm1(Dat-cre)Sage	dopaminergic neurons		Envigo	L	

	Drd1	KI Drd1(Cre)	Striatum Drd1 cells	[10]	-	-
		KI LE-Drd1em1(iCre)Berke	Striatum Drd1 cells	[4]	RRC #856	L
	Drd2	KI-Drd2(P2A-Cre)	Hippocampus	[10]	-	-
	Gad1	LE-Tg(Gad1-iCre)3Ottc	GABAergic neurons	[11]	RRC #751	L
	HCRT (human promoter) express EGFP	W-Tg(HCRT-cre,-EGFP)B5Ahky	Orexin neurons	[12]	NBRP #778	CP
	Pvalb	LE-Tg(Pvalb-cre)2-28Koba	Parvalbumin neurons (forbrain)	[13]	NBRP #853	L
		KI HsdSage:LE-Pvalbtm1(IRES-Cre)Sage	inhibitory neurons		Envigo	L
	Nestin	KI-Nestin(Cre)	Hippocampus	[5]	-	-
	Sst	KI HsdSage: LE-SSt.Cre ^{tm1Sage}	Somatostatin neurons		Envigo	L
	Tac1	LE-Tg(Tac1-cre)6-7Koba	Study in basal ganglia	[14]	NBRP #893	CP
		Tg(Tac1-cre)4-1Koba	Study in basal ganglia	[14]	NBRP #900	CP
	TH	LE-Tg(TH-Cre)3.1Deis	Dopaminergic and noradrenergic neurons	[6]	RRC #659	L
		KI HsdSage:SD-TH ^{tm1(IRES-Cre)Sage}	Dopaminergic neurons	[15,16]	Envigo	L
	Tph2	KI HsdSage:LE-Tph2 ^{tm1(T2A-Cre)Sage}	Serotonergic neurons		Envigo	L
	VGAT	KI HsdSage:LE-VGAT ^{tm1(IRES-Cre)Sage}	VGAT GABAergic neurons		Envigo	L
	VGAT (Mouse Slc32a1 promoter)	W-Tg(Slc32a1-cre)1_4Fusa	GABAergic neurons	[17]	NBRP #875	CP
		W-Tg(Slc32a1-cre)3_5Fusa	GABAergic neurons	[17]	NBRP #839	CP
		W-Tg(Slc32a1-cre)2_5Fusa	GABAergic neurons	[17]	NBRP #876	CP
		W-Tg(Slc32a1-cre)5_9Fusa	GABAergic neurons	[17]	NBRP #877	CP
	VIP	KI HsdSage:LE-VIP ^{tm1(T2A-Cre)Sage}	VIP GABAergic interneurons		Envigo	L
Muscle	α -MHC	WISTAR.Tg(MHC-Cre)-GC/ILAS	Cardiac muscle	[1]	Ratresource.com #GC00180	L
Metabolic	FABP2	KI SD.FabP2(tm-Cre)-GC/ILAS	epithelial cells of the small intestine, some liver cells	[1,18]	Ratresource.com #GC00066	CP
Nephrology	Alb	KI SD.Alb(tm-Cre) -GC/ILAS	Hepatocytes	[1]	Ratresource.com #GC00108	-

Uncharacterized Cre models

System /Tissue	Promoter /Gene	Model name Strain.Tg(promoter- Cre) KI Strain.locus(Cre)	Reference / Donor (Lab)	Repository ID# /vendor	L/CP
Cardiovascular	Cdh5	SD-Tg(Cdh5-cre)2Mcwi	MCW Gene Editing Rat Resource Center	RGD # 13207537	L
Nervous system	Calb2	KI- Calb2(T2A-Cre)	[19]	Envigo R&D	-
	CamK2	KI SD.Camk2a(tm-Cre)-GC/ILAS	Lianfeng Zhang, Yuanwu Ma, Xu Zhang, Wei Chen	Ratresource.com #GC00169	L
	Crh	KI WISTAR.CRH(tm-Cre)-GC/ILAS		Ratresource.com #GC00178	L
	Dcx	KI SD.Dcx(tm-Cre)-GC/ILAS		Ratresource.com #GC00148	L
	Dlg3	KI SD.Dlg3(tm-Cre)-GC/ILAS		Ratresource.com #GC00167	L
	Drd1a	LE-Tg(Drd1a-iCre)3Ottc	Brandon Harvey/Jim Pickel	RRC #767	L
	Drd2	LE-Tg(Drd2-iCre)1Ottc		RRC #768	L
	Drd3	KI SD.Drd3(tm-Cre)-GC/ILAS	Lianfeng Zhang, Yuanwu Ma Xu Zhang, Wei Chen	Ratresource.com #GC00140	L
	GFAP	KI SD.GFAP(tm-cre)-GC/ILAS		Ratresource.com #GC00184	CP
	GlyT2	LE-Tg(GlyT2-iCre)1Ottc	Brandon Harvey/Jim Pickel	RRC #750	CP
	Mbp	KI SD.Mbp(tm-Cre)-GC/ILAS	Lianfeng Zhang, Yuanwu Ma, Xu Zhang, Wei Chen	Ratresource.com #GC00142	L
	Npy	KI SD.Npy(tm-Cre)-GC/ILAS		Ratresource.com #GC00131	CP
	PCP4	KI SD.PCP4(tm-cre) -GC/ILAS		Ratresource.com #GC00182	CP
	Pnoc	KI SD.Pnoc(tm-Cre)-GC/IL		Ratresource.com #GC00145	L
	Pvalb	KI WISTAR.PVALB(tm-Cre)-GC/ILAS	Brandon Harvey/Jim Pickel	Ratresource.com #GC00176	L
		LE-Tg (Pvalb-iCre)2Ottc		RRC #773	L
	RGS14	KI SD.RGS14(tm-cre) -GC/ILAS	Lianfeng Zhang, Yuanwu Ma, Xu Zhang, Wei Chen	Ratresource.com #GC00183	CP
	Tbr1	KI SD.Tbr1(tm-Cre)-GC/ILAS		Ratresource.com #GC00168	L
	Vglut3 /Slc17a8	KI SD.Vglut3(tm-Cre)-GC/ILAS		Ratresource.com #GC00132	L
		KI WISTAR.Vglut3(tm-Cre)-GC/ILAS		Ratresource.com #GC00111	L
Vip	KI SD.Vip(tm-Cre)-GC/ILAS	Ratresource.com #GC00129		L	
Gastrointestinal	Gda	KI SD.Gda(tm-Cre)-GC/ILAS		Ratresource.com #GC00143	L
Thyroid gland	Nkx2-1	KI SD.Nkx2-1(tm-Cre)-GC/ILAS	Ratresource.com #GC00130	CP	

Metabolic	Avp	KI WISTAR.AVP(tm-Cre)-GC/ILAS	Lianfeng Zhang, Yuanwu Ma, Xu Zhang, Wei Chen	Ratresource.com #GC00177	L
	Isca1	KI SD.ISCA1(tm-mcherry-Cre)-GC/ILAS	Lianfeng Zhang, Xinlan Yang, Dan Lu, Yuanwu Ma, Xu Zhang, Wei Chen	Ratresource.com #GC00112	L
	Pomc	KI WISTAR.POMC(tm-Cre)-GC/ILAS		Ratresource.com #GC00174	L
Ophthalmology	Pax6	KI SD.Pax6(tm-Cre)-GC/ILAS		Ratresource.com #GC00147	CP
Cancer	S100A4/S100	KI SD.S100a4(tm-Cre)-GC/ILAS		Ratresource.com #GC00146	CP
	Lxn	KI SD.latexin(tm-Cre)-GC/ILAS		Ratresource.com #GC00141	CP
Immune system	Cxcl14	KI SD.Cxcl14(tm-Cre)-GC/ILAS		Ratresource.com #GC00144	L

Inducible Cre models

System /Tissue	Promoter /Gene	Model name Strain.Tg(promoter- Cre) KI Strain.locus(Cre)	Phenotype specificity	Reference / Donor (Lab)	Repository ID# /vendor	L/CP
Ubiquitous	UBC	WKY-Tg(Ubc-cre/ERT2)5Mcwi	Ubiquitous expression	MCW Gene Editing Rat Resource Center	RGD #13792828	CP
		WKY-Tg(Ubc-cre/ERT2)4Mcwi	Ubiquitous expression	MCW Gene Editing Rat Resource Center	RGD #13792827	CP
	UBC (Human UBC promoter)	SD-Tg(UBC-cre/ERT2)7Narl	Ubiquitous expression		RMRC23002	CP
	CamK2	SD-Tg(Camk2a-cre/ERT2)ZiRrrc	Forebrain CamK2 expressing cells	[20]	RRC #688	CP
	Tph2 (mouse gene)	SD-Tg(TPH2-CreERT2)	Serotonergic (5HT) neurons	[21]	-	-
Cardiovascular	Dbn1d1	KI SD.Dbn1d1(tm-Cre)-GC/ILAS		[18]	Ratresource.com #GC00136	CP
Muscle	Myh7/ Mlc2	Tg-Myh7-cre/ERT2)22	-	MCW Gene Editing Rat Resource Center	RGD #13207563	L
Endocrine	Cyp11b2	SS-Tg(Cyp11b2-cre/ERT2)2Mcwi	-	MCW Gene Editing Rat Resource Center	RGD # 13208571	L
Nephrology	Aqp2	SS-Tg(Aqp2-cre/ERT2)4Mcwi	-	MCW Gene Editing Rat Resource Center	RGD #13207560	L
	Nphs2 (podocin)	SS-Tg(Nphs2-cre/ERT2)4Mcwi	-	MCW Gene Editing Rat Resource Center	RGD #13207551	L

Immune system	CX3Cr1	SD-Tg(Cx3cr1-Cre-ERT2)3Ottc	Microglia and some monocytes	Brandon Harvey	RRC #862	L
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Cre reporter models

Insertion	Model name Strain.Tg(promoter- Cre) KI Strain.locus(Cre)	Phenotype Before Cre	Phenotype After Cre	Reference /Donor (lab)	Repository #	L/CP
Transgenic	SD-Tg(CAG-lacZ)541Htsu	-	LacZ	[3]	NBRP #569	CP
	SD-Tg(CAG.LoxP.EGFP)Zi	lacZ	EGFP	[20,21]	RRC #689	CP
	SD-Tg(CAG-loxP-mCherry-loxP-EGFP)Qly	mCherry	EGFP	-	RRC #844	CP
	W-Tg(CAG-DsRed2/GFP)15Jmsk	dsRed	EGFP	[2]	RRC #300	CP
	F344-Tg(CAG-loxP-STOP-loxP-ZsGreen)561Bryd	-	ZsGreen	[22]	RRC #797	L
	LE-Tg(DIO-mCherry)2Ottc	-	mCherry	[9]	RRC #687	CP
	LE-Tg(Gt(ROSA)26Sor-CAG-tdTomato)24Jfhy	-	TdTomato	[17,23]	NBRP #734	L
	LE-Tg(Dio-iRFP)3Ottc	-	iRFP	[8]	RRC #747	CP
	SD-Tg(DIO-iRFP)9Ottc	-	iRFP	[8]	RRC #748	CP
Rosa26	SD-(ROSA)26em1(LTR-nLuc)Ottc	-	Nanoluciferase	Optogenetics and Transgenic Technology Core	RGD# 21083604	-
	LE-(ROSA)26 em1(LTR-nLuc)Ottc	-	anoluciferase	-	RGD# 13208223	-
	HsdSage:LE-Rosa26tm1(tdTomato)Sage	-	TdTomato	Envigo		L
	KI-Rosa26(pCAG-loxP-3*STOP-loxP-tdTomato-WPRE-bGHpA)	-	TdTomato	[10]	-	-
	KI WIATAR.Rosa26(tm-imCherry)-GC/ILAS	GFP	mCherry	[1]	Ratresource.com #GC00175	L

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