

Rodent Genetic Resources list of available MUSC strains (based on information provided by 2023-12-13)

This list is for the internal use of MUSC investigators and is not to be distributed

This list is sorted first by species (rat, then mouse), then by gene/strain name; it is searchable for any text query

For details about any listed line, contact the lab via the provided NetID

To add new entries to this list, go to <https://redcap.musc.edu/surveys/?s=CC9EJJJ3E9A3XPA7>

Net ID	Species	Type of model	Gene, gene product, or strain name	Promoter	Source and catalog number	Other Information
mcginty	Rat	Transgenic/knockin	Cre	Drd1 (Dopamine D1 receptor)	NIDA RRRC#767	Long Evans background; Kokane et al J Neuroscience 43(22):4019-32, 2023
mcginty	Rat	Transgenic/knockin	Cre	Drd2 (Dopamine D2 receptor)	NIDA RRRC#768	Long Evans background; Kokane et al J Neuroscience 43(22):4019-32, 2023
olp202	Rat	Unique strain	T2DN (spontaneous non-obese type 2 diabetes), PCK (polycystic kidney disease ARPKD)			
geesey	Mouse	Unique strain	3x-Tg-AD	Psen1 PS1M146V mutation and the co-injected APPSwe and tauP301L transgenes (Tg(APP ^{Swe} ,tauP301L)1Lfa))		To study plaque and tangle pathology associated with synaptic dysfunction and Alzheimer's disease.
mehrotr	Mouse	Null/knockout	Acc1			Acc1-KO
bot	Mouse	Transgenic/knockin	APP/PS1	Multiple		
johnsovcv	Mouse	Conditional null/knockout	ASAH1			MTA agreement needed with originator before this strain can be shared
mehrotr	Mouse	Null/knockout	Asm			ASM-KO
geesey	Mouse	Unique strain	B6.Cg-Tg(SOD1*G93A)1Gur/J		Jackson Strain #004435	ALS pathogenesis
tomlinss	Mouse	Conditional null/knockout	C3		https://pubmed.ncbi.nlm.nih.gov/32187519/	B6
tomlinss	Mouse	Null/knockout	C3a receptor			https://pubmed.ncbi.nlm.nih.gov/30568037/
tomlinss	Mouse	Null/knockout	C5a receptor 1			
hes225	Mouse	Transgenic/knockin	Cas9-tdTomato	Myh6		Originally from Olson lab (PMID: 26719419), then from Ge Tao lab at MUSC. Cardiomyocyte-specific expression of Cas9-2A-tdTomato
mehrotr	Mouse	Null/knockout	Cbs			Cbs-KO
mehrotr	Mouse	Null/knockout	Cd36			CD36-KO
mehrotr	Mouse	Null/knockout	Cd38			CD38-KO
sad210	Mouse	Conditional null/knockout	Cdh1			frozen
mehrotr	Mouse	Null/knockout	Cers1			CerS1-KO
ogretmen	Mouse		CerS1			Contact lab to determine what type of genetic resource this is
mehrotr	Mouse	Null/knockout	Cers2			Cers2-KO
mehrotr	Mouse	Null/knockout	Cers4			Cers4-KO
mehrotr	Mouse	Null/knockout	Cers5			CerS5-KO

ogretmen	Mouse		CerS5			Contact lab to determine what type of genetic resource this is
mehrotr	Mouse	Null/knockout	Cers6			CerS6-KO
ogretmen	Mouse		CerS6			Contact lab to determine what type of genetic resource this is
tomlinss	Mouse	Null/knockout	Complement C7		JAX030234	B6
geesey	Mouse	Conditional null/knockout	Complement Protein C3			Background C57BL/6J
geesey	Mouse	Null/knockout	Complement Protein C7			
geesey	Mouse	Null/knockout	Complement Protein CD11c			
geesey	Mouse	Conditional null/knockout	Complement Protein CR3			Background C57BL/6J
geesey	Mouse	Conditional null/knockout	Complement Protein CR4			Background C57BL/6J
sad210	Mouse	Transgenic/knockin	Cre	Afp		frozen
sad210	Mouse	Transgenic/knockin	Cre	Alb-Afp		frozen
geesey	Mouse	Transgenic/knockin	Cre	Alb-Cre		Background C57BL/6J
tomlinss	Mouse	Transgenic/knockin	Cre	Albumin promoter	https://www.biorxiv.org/content/10.1101/2022.02.03.478963v1.full	constitutive Cre in hepatocytes
jar209	Mouse	Transgenic/knockin	Cre	Calb2	JAX #010774	calreticulin gene IRES-Cre knockin
ank210	Mouse	Transgenic/knockin	Cre	Car1		pending
mehrotr	Mouse	Transgenic/knockin	Cre	Cd4		CD4-cre
jar209	Mouse	Transgenic/knockin	Cre	Crh	JAX #012704	IRES-Cre
woodward	Mouse	Transgenic/knockin	Cre	D2		
bot	Mouse	Transgenic/knockin	Cre	DAT		
esa300	Mouse	Transgenic/knockin	Cre	Dat		
esa300	Mouse	Transgenic/knockin	Cre	Drd2		
tam229	Mouse	Transgenic/knockin	Cre	Ednrb		
sad210	Mouse	Transgenic/knockin	Cre	Foxa3		frozen
luh200	Mouse	Transgenic/knockin	Cre	Fsp		
esa300	Mouse	Transgenic/knockin	Cre	Gcg		
sad210	Mouse	Transgenic/knockin	Cre	Hnf3g		frozen
tam229	Mouse	Transgenic/knockin	Cre	Hoxb1		
stancilj	Mouse	Transgenic/knockin	Cre	Ins1	JAX 026801	Knock-in of Cre recombinase into the endogenous Ins1 locus - used to generate pancreatic beta-cell specific knockouts when combined with a floxed allele.
luh200	Mouse	Transgenic/knockin	Cre	Isl1		
ank210	Mouse	Transgenic/knockin	Cre	K14		
mehrotr	Mouse	Transgenic/knockin	Cre	LysM		LysM-cre
jer233	Mouse	Transgenic/knockin	Cre	Math1		
get200	Mouse	Transgenic/knockin	Cre	Myh6		
hes225	Mouse	Transgenic/knockin	Cre	Myh6		Cardiomyocyte-specific, transgenic
esa300	Mouse	Transgenic/knockin	Cre	Nts		
geesey	Mouse	Transgenic/knockin	Cre	P2ry12-ERT2		Background C57BL/6J
tam229	Mouse	Transgenic/knockin	Cre	Pax2		
aws4	Mouse	Transgenic/knockin	Cre	Penk	JAX025112	
tam229	Mouse	Transgenic/knockin	Cre	Phox2b		
jar209	Mouse	Transgenic/knockin	Cre	Pvalb	JAX #012358	2A-Cre
tam229	Mouse	Transgenic/knockin	Cre	Sox10		
tam229	Mouse	Transgenic/knockin	Cre	Sox2		
tam229	Mouse	Transgenic/knockin	Cre	Tbx18		
tam229	Mouse	Transgenic/knockin	Cre	Th		

tam229	Mouse	Transgenic/knockin	Cre	Tie2		
esa300	Mouse	Transgenic/knockin	Cre	Trh		
sad210	Mouse	Transgenic/knockin	Cre	Villin		frozen
tam229	Mouse	Transgenic/knockin	Cre	Wnt1		
sad210	Mouse	Transgenic/knockin	Cre	Wt1		frozen
beckerh	Mouse	Transgenic/knockin	Cre		Jax Labs	Contact lab to determine what type of genetic resource this is
luh200	Mouse	Transgenic/knockin	CreER	Isl1		
tomlinss	Mouse	Transgenic/knockin	CreER	P2Y12 receptor (microglia specific)	JAX034727	Inducible deletion of microglial C3, also cytoplasmic C3 reporter tdTomato
get200	Mouse	Transgenic/knockin	CreER	Pdgfra		
luh200	Mouse	Transgenic/knockin	CreER	Pdgfra		
sad210	Mouse	Transgenic/knockin	Cre-ER	Foxa2		frozen
sad210	Mouse	Transgenic/knockin	Cre-ER	Myh6		frozen
tam229	Mouse	Transgenic/knockin	Cre-ER	Plp1		
tam229	Mouse	Transgenic/knockin	Cre-ER	Th		
dcg201	Mouse		Cre-ER			Contact lab to determine what type of genetic resource this is
tomlinss	Mouse	Transgenic/knockin	CreERT2	Aldh111 promoter, astrocyte specific, inducible Cre	JAX029655	Astrocyte specific inducible Cre, cytoplasmic C3 expression reporter tdTomato
aws4	Mouse	Transgenic/knockin	CreERT2	Fos	JAX030323	Commonly known as "FosTRAP2" line.
esa300	Mouse		CreERT2	Fos	JAX030323	Commonly known as "FosTRAP2" line.
jar209	Mouse	Transgenic/knockin	CreERT2	Fos	JAX #030323	Commonly known as "FosTRAP2" line.
mulholl	Mouse	Transgenic/knockin	CreERT2	Fos	JAX030323	Commonly known as "FosTRAP2" line.
get200	Mouse	Transgenic/knockin	CreERT2	Myh6		
get200	Mouse	Transgenic/knockin	CreERT2	Postn		
jar209	Mouse	Conditional null/knockout	Crh		Jax #030110	cryopreserved
jhh202	Mouse	Null/knockout	Cyp2e1		https://www.jax.org/strain/002910	
hes225	Mouse	Null/knockout	Cyth1			
Sad210	Mouse	Null/knockout	DGUOK		MGI:6111949	Dguok-em1(IMPC)J
get200	Mouse	Conditional on/active (incl reporters)	DTA	Rosa26		
hes225	Mouse	Null/knockout	E2f8			
tam229	Mouse	Null/knockout	Edn1			
tam229	Mouse	Null/knockout	Edn3			
tam229	Mouse	Null/knockout	Ednra			
tam229	Mouse	Null/knockout	Ednrb			
tam229	Mouse	Transgenic/knockin	EGFP	Cntn2		
tam229	Mouse	Transgenic/knockin	EGFP	Ednrb		
hammadsm	Mouse	Transgenic/knockin	Elov1			
slc200	Mouse	Conditional null/knockout	Erb3			
esa300	Mouse	Transgenic/knockin	Flp	Nts		
luh200	Mouse	Transgenic/knockin	Flp	Pdx1		
esa300	Mouse	Transgenic/knockin	Flp	Vgat		
esa300	Mouse	Transgenic/knockin	Flp	Vglut1		
luh200	Mouse	Conditional null/knockout	Foxf1			
sad210	Mouse	Null/knockout	Gata4			frozen
sad210	Mouse	Conditional null/knockout	Gata4			frozen
luh200	Mouse	Conditional null/knockout	Gata6			
sad210	Mouse	Conditional null/knockout	Gata6			frozen
mehrotr	Mouse	Transgenic/knockin	GFP	FoxP3		FoxP3-GFP

dcg201	Mouse	Conditional on/active (incl reporters)	GFP	Rosa26		
jer233	Mouse	Transgenic/knockin	GFP	Sox2		
luh200	Mouse		GFP	Ubc		Contact lab to determine what type of genetic resource this is
esa300	Mouse	Conditional null/knockout	Glp1r			Glp1r-flox
woodward	Mouse	Conditional on/active (incl reporters)	Grin2a(A825W)			
taf300	Mouse	Conditional on/active (incl reporters)	H11-CAG-loxp-stop-loxp- CAG		IMSR_JAX:035504	
hes225	Mouse	Null/knockout	hCD59	Hif1an		Not Hif1-alpha; Hif1an is a negative regulator of Hif1-alpha
sad210	Mouse	Null/knockout	Hnf3b			frozen
sad210	Mouse	Null/knockout	Hnf4			frozen
sad210	Mouse	Conditional null/knockout	Hnf4			frozen
tomlinss	Mouse	Transgenic/knockin	hSOD1 G93A (ALS)	human SOD1 promoter	JAX004435	B6
mehrotr	Mouse	Null/knockout	HuR			HuR-KO
mehrotr	Mouse	Transgenic/knockin	HuR			HuR-KI
tomlinss	Mouse	Null/knockout	ITGAM/Complement Receptor 3		JAX003991	B6
tomlinss	Mouse	Conditional null/knockout	ITGAM/CR3			developed by our lab
tomlinss	Mouse	Conditional null/knockout	ITGAX/CR4			developed by our lab
dcg201	Mouse	Transgenic/knockin	Kras G12D		JAX	
luh200	Mouse	Conditional on/active (incl reporters)	Kras G12D			Flanked by FRT sites (Flp-dependent)
tam229	Mouse	Conditional on/active (incl reporters)	LacZ	ROSA26 knock-in		
tam229	Mouse	Null/knockout	Lphn2			
esa300	Mouse		Isl-tdtomato			Contact lab to determine what type of genetic resource this is
hes225	Mouse	Transgenic/knockin	mCAT	CAG (?) or other ubiquitous promoter		mitochondrial catalase
jer233	Mouse		ND2:SmoA1			Contact lab to determine what type of genetic resource this is
hes225	Mouse	Null/knockout	Nox2			NADPH oxidase 2
hes225	Mouse	Null/knockout	Nox4			NADPH oxidase 4
get200	Mouse	Conditional null/knockout	Nrf2			
tam229	Mouse	Conditional on/active (incl reporters)	nT-nG	ROSA26 knock-in		
esa300	Mouse	Conditional null/knockout	Nts			Nts-flox
ogretmen	Mouse		P17			Contact lab to determine what type of genetic resource this is
luh200	Mouse	Conditional null/knockout	p53			Flanked by FRT sites (Flp-dependent)
get200	Mouse	Conditional null/knockout	Pitx2			
ank210	Mouse	Null/knockout	Plekha7			
ank210	Mouse	Conditional null/knockout	Plekha7			
tam229	Mouse	Null/knockout	Plxna3			
tam229	Mouse	Null/knockout	Plxna4			
rto201	Mouse	Null/knockout	Prf		Jax Strain #:002407	
rto201	Mouse		Prf Knockout:: OT1			Contact lab to determine what type of genetic resource this is
bot	Mouse	Null/knockout	Progranulin			
jer233	Mouse	Conditional null/knockout	Ptch1-Lox			
luh200	Mouse	Conditional null/knockout	Pten			
mehrotr	Mouse	Null/knockout	Rag1			Rag1-KO

tam229	Mouse	Null/knockout	Ret			
mehrotr	Mouse	Null/knockout	S1pr1			S1PR1-KO
ogretmen	Mouse		S1pR1			Contact lab to determine what type of genetic resource this is
mehrotr	Mouse	Null/knockout	S1pr2			S1PR2-KO
mehrotr	Mouse	Null/knockout	S1pr3			S1PR3-KO
mehrotr	Mouse	Transgenic/knockin	Sgm3	Nsg		NSG-SGM3
mehrotr	Mouse	Null/knockout	Sk1			SK1-KO
mehrotr	Mouse	Null/knockout	Sk2			SK2-KO
ogretmen	Mouse		SphK1			Contact lab to determine what type of genetic resource this is
ogretmen	Mouse		SphK2			Contact lab to determine what type of genetic resource this is
mehrotr	Mouse	Null/knockout	Spns2			Spns2-KO
ogretmen	Mouse		Spns2			Contact lab to determine what type of genetic resource this is
sad210	Mouse	Conditional null/knockout	Srf			frozen
luh200	Mouse	Conditional null/knockout	Stat3			
get200	Mouse	Conditional on/active (incl reporters)	Sun1GFP	Rosa26		nuclear GFP
hes225	Mouse	Conditional on/active (incl reporters)	Sun1GFP	Rosa26		Conditional nuclear GFP
tam229	Mouse	Conditional on/active (incl reporters)	SYPtd-Tomato	ROSA26 knock-in		
tomlinss	Mouse	Transgenic/knockin	tdTomato	endogenous C3 promoter	https://pubmed.ncbi.nlm.nih.gov/32187519/	
luh200	Mouse	Conditional on/active (incl reporters)	tdTomato	Rosa26		Flanked by FRT sites (Flp-dependent)
luh200	Mouse	Conditional on/active (incl reporters)	tdTomato	Rosa26		Flanked by loxP sites (Cre-dependent)
beckerh	Mouse	Transgenic/knockin	tdTomato			Contact lab to determine what type of genetic resource this is
geesey	Mouse	Conditional on/active (incl reporters)	tdTomato			Background C57BL/6J
tam229	Mouse	Conditional on/active (incl reporters)	td-Tomato	ROSA26 knock-in		
bot	Mouse	Transgenic/knockin	TgA53T			
hes225	Mouse	Null/knockout	Tnni3k			Cardiomyocyte-specific kinase; full null, also K489R and I685T point mutations
jod224	Mouse	Transgenic/knockin	Trp53*R270H-Myc	Ovgp1	not yet public	Trp53em1Jdel_Tg(Ovgp1-Trp53*R270H-Myc); ovarian cancer
mehrotr	Mouse	Transgenic/knockin	Trx1			Trx-Tg
hes225	Mouse	Transgenic/knockin	Trx1 (Txn1)	CAG (?)		Ubiquitous promoter, probably CAG but would need to confirm. Obtained within MUSC from Shikar Mehrotra, MTA required from original source Nilanjana Maulik
bot	Mouse	Unique strain	Ts65Dn			

stancilj	Mouse	Conditional null/knockout	Txnrd1	JAX 028283	Conditional knockout allele of cytosolic thioredoxin reductase (Txnrd1). Can be used to generate cell-type specific knockout of Txnrd1 when combined with a Cre driver allele.
mehrotr	Mouse	Null/knockout	Upc2		UCP2-KO