

Transgenic Mouse Genotyping

Available pre-validated assays (last updated October 2022)

Arizona Genetics Core

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Assays in **BOLD** are found in our
"TGM Assay" drop down list

Regions of Interest	Assay Name	Apx. WT amplicon size	Apx. MUT amplicon size	Genotyping protocol
aryl hydrocarbon receptor	AHR	100	140	22534
Ai6(RCL-ZsGreen)	Ai6	297	199	28544
Ai14(RCL-tdT)-D	Ai14	297	200	7914
Ai32(RCL-ChR2(H134R)/EYFP)	Ai32	297	212	24109
Akt1	Akt1	385	265	
Apolipoprotein E	ApoE, ApoE3 , ApoE4 , ApoE-rtTA	varies	varies	ApoE4
Transforming Growth Factor Beta1	B1-Flox	134	261	
Beta 2 adrenergic receptor	bAR-KO-F	166	358	
Beta 2 adrenergic receptor	bAR-KO-M	391	256	
Transforming Growth Factor Beta2	Beta2	132	256	
Transforming Growth Factor Beta3	Beta3 , B3-Flox , B3-Cre, 409Y	varies	varies	
Cre-activated BRaf mutant allele	Braf	185	306	
human C9orf72 (C9-500)	C9ORF72	internal control	213	30889
Rosa26-floxed STOP-Cas9 knockin	Cas9N	297	110	21206
Breast Cancer 1 - tumor suppressor gene	BRCA1	464	510	
cadherin 1	Cdh1	242	334	
cadherin 2	Cdh2	510	150	31300
lncRNA (Gt(ROSA)26Sor) -	Chr2-tom, creTOM, tdTomato, H2B , Cas9, R26-Luc, ReaChr, ROSACreER, ROSA LacZ	varies	varies	
tamoxifen-dependent Cre recombinase	cre-ERT2	internal control	206	24275
Connexin 37	Cx37	750	233	
dopamine receptor D2, transgene insertion ER44	D2-Cre	internal control	700	32108
apical endosomal glycoprotein precursor	DC4	416	581	
simian diphtheria toxin receptor-enhanced green fluorescent protein (DTR-eGFP) fusion protein	DeREG	internal control	370	27228
cytokinesis 7 (Dock7m), A.K.A. misty	DOCK7	481	200	28560
Generic Cre	E11a-Cre , MMTV-Cre, CDX2-Cre, D1-Cre , Era, Erb, FOS	internal control	varies	22392
estrogen receptor 1	ESR1	287	550	27237
Flt3l (FMS-like tyrosine kinase 3 ligand) KO	FLT3L	227	370	26965
loxP sites flanking exon 2 of the forkhead box O3 (Foxo3) transcription factor gene	Foxo3a	194	250	33903
nuclear receptor subfamily 1, group H, member 4 - protein includes thyroid hormone receptor domain and zinc finger domains	FXR	internal control	182	
Glucose-6-phosphate dehydrogenase	G6PD	243	308	
Glucosidase beta acid	GBA	400	200	000117-UNC
Flourescent Proteins (Generic GFP)	GFP, GFP2	varies	varies	29498
Human ACE2 receptor	hACE2	internal control	249	34860
Humanized App gene	hApp, J20-App	varies	varies	
Human leukocyte antigen DRB1*1501	HLA	internal control	197	
Human keratin 14 promoter	K14-Cre	internal control	100	18964
Kirsten rat sarcoma oncogene 2, Lox-Stop-Lox deletion	KRAS	450	327	01X16
LEF (TCF-Cre)	LEF	internal control	530	
Lepr ^{fl}	LEPR	135	108	348
leucine rich repeat containing G protein coupled receptor 5 Lgr5-EGFP-IRES-creERT2 knock-in	LGR5	386	119	18323
leucine rich repeat containing G protein coupled receptor 5; targeted mutation 2	Lgr5-DTR	420	310	
microtubule-associated protein tau KO	MAPT	269	170	26600
creatine kinase, muscle	MCK-Cre	internal control	400	
Ttn locus	MDM	795	513	1512
Map2k3	MKK3	380	340	6416
Meox1	Mox1-Cre	3010	2600, 800	
mThy1-α-synuclein	mTHY1	internal control	350	
Myosin-binding protein C	Mybcp1, Mybpc2, Mybpc3	varies	varies	
neomycin phosphotransferase	Neo	internal control	491	
NFU1 iron-sulfur cluster scaffold homolog, mitochondrial; paired with BsrI digest, rat model	NFU	447	141	
olfactomedin 1	OLFM1	428	346	
p16INK4a	p16-K	194	261	57
Transformation related protein 53	p53-Flox, p53-R172H , p53-R270H, p53-M, p53-K	varies	varies	01XM2
Pdx-1 promoter	PDX-Cre	internal control	650	01XL5
Recombination activating gene 1	Rag1 (Separated)	192	197	27761
Recombination activating gene 2	Rag2 (GRAB)	234	195	17845
ribosomal protein L22, RiboTag targeted mutation	Rpl22	243	290	23620
Scn8a, N1768D mutation; paired with Hinc II digest	Scn8a	327	209, 118	
sirtuin 1 floxed	Sirt1	550	750	28116
human solute carrier family 2 (facilitated glucose transporter), member 4 <i>SLC2A4</i>	SLC2A4	internal control	193	33203
SMAD3 and transforming growth factor Beta	SMAD3	130	210	
Smad4	SMAD4	436	500	25004
suppressor of cytokine signaling 3	Socs3	50	192	
sirtuin 1 Tg flox-STOP-flox	SOX	166	251	
signal transducer and activator of transcription 3	Stats3	145	185	
Sad1 and UNC84 domain containing 1 - GFP fusion	SUN1	241	225	31117
TRPV1	Trp-V1	496	475	17769
insertion of 9kb segment of mouse Vii1 gene drives expression of Cre recombinase fused to ligand-binding domain of human estrogen receptor	Vii-Cre	internal control	280	