

As part of our effort to understand the brain, the Allen Institute for Brain Science has generated over one hundred transgenic mouse lines for use in research. The creation of unique molecular reporter lines permits the visualization of fluorescent markers in selected cell or tissue types. Selected genes have been targeted as drivers for these molecular reporters, to allow visualization or manipulation of key cell classes. These lines are characterized and many of them made available to the neuroscience community via the Jackson Laboratory repository: www.jax.org.

Detailed gene expression data can be viewed for many of these lines at connectivity.brain-map.org/transgenic

| Mouse line | JAX stock ID number | Transgenic type: Drivers | Reference |
|-----------------------|---------------------|----------------------------|--|
| A930038C07Rik-Tg1-Cre | 17346 | BAC random insertion | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Adcyap1-T2A-Cre | 30155 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Avp-IRES2-Cre | 23530 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Calb1-IRES2-Cre | 28532 | Knock-in at Stop codon | publication pending |
| Calb1-T2A-dgCre | 23531 | Knock-in at Stop codon | publication pending |
| Camk2a-CreERT2 | 12362 | Random insertion | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Cart-IRES2-Cre | 28533 | Knock-in at Stop codon | publication pending |
| Cart-Tg1-Cre | 9615 | BAC random insertion | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Ctgf-T2A-dgCre | 28535 | Knock-in at Stop codon | Tasic at al, 2016. DOI:10.1038/nn.4216 |
| Erb4-F2A-CreERT2 | 12360 | Knock-in at Stop codon | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Esr2-IRES2-Cre | 30158 | Knock-in at Stop codon | publication pending |
| Fezf1-T2A-dCre | 25110 | Knock-in at Stop codon | publication pending |
| Gnb4-IRES2-Cre | 29587 | Knock-in at Stop codon | Wang et al, 2017. doi: 10.1002/cne.24047 |
| Gnb4-IRES2-CreERT2 | 30159 | Knock-in at Stop codon | publication pending |
| Htr1a-IRES2-Cre | 30160 | Knock-in at Stop codon | publication pending |
| Ndnf-IRES2-dgCre | 28536 | Knock-in at Stop codon | Tasic at al, 2016. DOI:10.1038/nn.4216 |
| Npr3-IRES2-Cre | NA | Knock-in at Stop codon | publication pending |
| Npy-IRES2-FlpO | 30211 | Knock-in at Stop codon | publication pending |
| Nr4a2-SA-IRES-Dre | NA | Knock-in at 2nd intron (?) | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ntng2-IRES2-Cre | 29588 | Knock-in at Stop codon | Wang et al, 2017. doi: 10.1002/cne.24047 |

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|---------------------|---------------------|--------------------------|--|
| Nxph4-T2A-CreERT2 | 22861 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Oxtr-T2A-Cre | NA | Knock-in at Stop codon | publication pending |
| Pdyn-T2A-CreERT2 | 30197 | Knock-in at Stop codon | publication pending |
| Penk-F2A-CreERT2 | 22862 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Penk-IRES2-Cre-neo | 25112 | Knock-in at Stop codon | publication pending |
| Plxnd1-IRES2-dgFlpO | NA | Knock-in at Stop codon | publication pending |
| Pvalb-T2A-Cre | 12358 | Knock-in at Stop codon | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Pvalb-T2A-CreERT2 | 21189 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Pvalb-T2A-dCre | 22863 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Pvalb-T2A-Dre | 21190 | Knock-in at Stop codon | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Pvalb-T2A-Flpe | 21191 | Knock-in at Stop codon | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Pvalb-T2A-FlpO | 22730 | Knock-in at Stop codon | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Rasgrf2-T2A-dCre | 22864 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Rasgrf2-T2A-dgFlpO | NA | Knock-in at Stop codon | publication pending |
| Rorb-IRES2-Cre | 23526 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Rorb-IRES2-FlpO | 29590 | Knock-in at Stop codon | publication pending |
| Rorb-P2A-FlpO | NA | Knock-in at Stop codon | publication pending |
| Rorb-T2A-tTA2 | 28537 | Knock-in at Stop codon | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Scnn1a-Tg1-Cre | 9111 | BAC random insertion | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Scnn1a-Tg2-Cre | 9112 | BAC random insertion | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Scnn1a-Tg3-Cre | 9613 | BAC random insertion | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Slc17a6-IRES2-FlpO | 30212 | Knock-in at Stop codon | publication pending |
| Slc17a7-IRES2-Cre | 23527 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Slc17a8-IRES2-Cre | 28534 | Knock-in at Stop codon | publication pending |
| Slc32a1-IRES2-FlpO | NA | Knock-in at Stop codon | publication pending |
| Slc32a1-T2A-FlpO | 29591 | Knock-in at Stop codon | publication pending |
| Snap25-IRES2-Cre | 23525 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Sst-Cre | NA | Knock-in at Start codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |

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|---------------------|---------------------|--------------------------|--|
| Tac1-IRES2-Cre | 21877 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Tac2-IRES2-Cre | 21878 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Tacr1-T2A-Cre | NA | Knock-in at Stop codon | publication pending |
| Tnnt1-IRES2-CreERT2 | NA | Knock-in at Stop codon | publication pending |
| Trib2-F2A-CreERT2 | 22865 | Knock-in at Stop codon | Harris et al, 2014. DOI: 10.3389/fn-cir.2014.00076 |
| Vipr2-IRES2-Cre | NA | Knock-in at Stop codon | publication pending |
| Wfs1-Tg2-CreERT2 | 9614 | BAC random insertion | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Wfs1-Tg3-CreERT2 | 9103 | BAC random insertion | Madisen et al, 2010. DOI: 10.1038/nn.2467 |

| Mouse Line | JAX stock ID number | Transgenic type: Reporters | Reference |
|--------------------------------------|---------------------|----------------------------|---|
| Ai110(RCL-FnGF-nT) | NA | Knock-in at ROSA26 locus | publication pending |
| Ai133(TITL-ssAPEX2tm) | 30213 | Knock-in at TIGRE locus | publication pending |
| Ai134(TITL-ChR2-YFP) | NA | Knock-in at TIGRE locus | publication pending |
| Ai136(TITL-ReaChR-YFP) | 30216 | Knock-in at TIGRE locus | publication pending |
| Ai139(TIT2L-GFP-ICL-TPT) | 30219 | Knock-in at TIGRE locus | publication pending |
| Ai14(RCL-tdT) | 7914 | Knock-in at ROSA26 locus | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Ai140(TIT2L-GFP-ICL-tTA2) | 30220 | Knock-in at TIGRE locus | publication pending |
| Ai148(TIT2L-GC6f-ICL-tTA2) | 30328 | Knock-in at TIGRE locus | publication pending |
| Ai161(TIT2L-GFP-ICR-tTA2) | NA | Knock-in at TIGRE locus | publication pending |
| Ai162(TIT2L-GC6s-ICL-tTA2) | NA | Knock-in at TIGRE locus | publication pending |
| Ai163(TIT2L-GC6s-ICL-TPT) | NA | Knock-in at TIGRE locus | publication pending |
| Ai167(TIT2L-ChrimsonR-tdT-ICL-tTA2) | NA | Knock-in at TIGRE locus | publication pending |
| Ai168(TIT2L-oChIEF-P2A-tdT-ICL-tTA2) | NA | Knock-in at TIGRE locus | publication pending |
| Ai169(TIT2L-ASAP2-ICL-tTA2) | NA | Knock-in at TIGRE locus | publication pending |
| Ai170(TIT2L-ASAP2-Kv-ICL-tTA2) | NA | Knock-in at TIGRE locus | publication pending |
| Ai2(RCL-EYFP) | 7920 | Knock-in at ROSA26 locus | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Ai27(RCL-ChR2H134R-tdT) | 12567 | Knock-in at ROSA26 locus | Madisen et al, 2012. DOI: 10.1038/nn.3078 |

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|--------------------------|---------------------|----------------------------|---|
| Ai3(RCL-EYFP) | 7903 | Knock-in at ROSA26 locus | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Ai31(RCL-Syp-EmGFP) | NA | Knock-in at ROSA26 locus | publication pending |
| Ai32(RCL-ChR2H134R-EYFP) | 012569, 024109 | Knock-in at ROSA26 locus | Madisen et al, 2012. DOI: 10.1038/nn.3078 |
| Ai34(RCL-Syp-tdT) | 12570 | Knock-in at ROSA26 locus | Abraira et al., 2017. doi: 10.1016/j.cell.2016.12.010 |
| Ai35(RCL-Arch-EGFP-ER2) | 12735 | Knock-in at ROSA26 locus | Madisen et al, 2012. DOI: 10.1038/nn.3078 |
| Ai38(RCL-GCaMP3) | 14538 | Knock-in at ROSA26 locus | Zariwala et al, 2012. DOI: 10.1523/JNEUROSCI.4469-11.2012 |
| Ai39(RCL-eNpHR3.0-EYFP) | 14539 | Knock-in at ROSA26 locus | Madisen et al, 2012. DOI: 10.1038/nn.3078 |
| Ai40(RCL-ArchT-EGFP) | 21188 | Knock-in at ROSA26 locus | publication pending |
| Ai47(RCL-triGFP) | NA | Knock-in at ROSA26 locus | Steinecke et al., 2017. doi: 10.1523/ENEURO.0057-17.2017 |
| Ai57(RCFL-Jaws) | NA | Knock-in at ROSA26 locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai6(RCL-ZsGreen) | 7906 | Knock-in at ROSA26 locus | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Ai62(TITL-tdT) | 22731 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai63(TIT-tdT) | NA | Knock-in at TIGRE locus | publication pending |
| Ai65(RCFL-tdT) | 21875 | Knock-in at ROSA26 locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai65F(RCF-tdT) | NA | Knock-in at ROSA26 locus | publication pending |
| Ai66(RCRL-tdT) | 21876 | Knock-in at ROSA26 locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai66R(RCR-tdT) | NA | Knock-in at ROSA26 locus | publication pending |
| Ai72(RCL-VSFPB) | NA | Knock-in at ROSA26 locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai75(RCL-nT) | 25106 | Knock-in at ROSA26 locus | publication pending |
| Ai78(TITL-VSFPB) | 23528 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai79(TITL-Jaws) | 23529 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai80(RCFL-CatCh) | 25109 | Knock-in at ROSA26 locus | publication pending |
| Ai82(TITL-GFP) | 23532 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai85(TITL-iGluSnFr) | 26260 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai86(TITL-ArcLight) | NA | Knock-in at TIGRE locus | publication pending |
| Ai87(RCL-iGluSnFr) | NA | Knock-in at ROSA26 locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |

| Mouse Line | JAX stock ID number | Transgenic type: Reporters | Reference |
|--------------------|---------------------|----------------------------|--|
| Ai9(RCL-tdT) | 7909 | Knock-in at ROSA26 locus | Madisen et al, 2010. DOI: 10.1038/nn.2467 |
| Ai90(TITL-Chronos) | 21189 | Knock-in at TIGRE locus | publication pending |
| Ai92(TITL-YCX2.60) | 26262 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai93(TITL-GCaMP6f) | 24103 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai94(TITL-GCaMP6s) | 24104 | Knock-in at TIGRE locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai95(RCL-GCaMP6f) | 24105 | Knock-in at ROSA26 locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Ai96(RCL-GCaMP6s) | 24106 | Knock-in at ROSA26 locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Chrm2-tdT | 30330 | Chrm2 knock-in locus | publication pending |
| Snap25-LSL-F2A-GFP | 21879 | Snap25 knock-in locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| Snap25-T2A-GCaMP6s | 25111 | Snap25 knock-in locus | Madisen et al, 2015. DOI: 10.1016/j.neuron.2015.02.022 |
| TITL-RCaMP1.07 | 30217 | Knock-in at TIGRE locus | Bethge et al, 2017. doi: 10.1371/journal.pone.0179460 |

NA = Not available at JAX