Resource Summary Report

Generated by dkNET on Apr 15, 2025

Allen Institute for Brain Science Transgenic Mouse Study

RRID:SCR_002999
Type: Tool

Proper Citation

Allen Institute for Brain Science Transgenic Mouse Study (RRID:SCR_002999)

Resource Information

URL: http://transgenicmouse.alleninstitute.org/

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Description: A comprehensive characterization of expression patterns of genetically-controlled markers or tool genes in the brains of transgenic mice generated by the Allen Institute as well as the broad scientific community. Providing standardized, detailed, anatomical profiling of transgene expression throughout the brain, this dataset is intended to reveal the potential of each transgenic mouse line and help researchers choose the appropriate tools for their studies. Transgenic mice are valuable tools to label selective neuronal or non-neuronal populations, modulate gene expression in these cells or manipulate activity of these cells for the study of neural circuits and brain function. The Allen Institute has launched a project to generate a variety of transgenic mouse lines, mainly using the Cre/lox system, to express fluorescent probes or neuronal activity manipulating tools in a variety of cell types in the brain. At the same time, utilizing Allen Institute's unique high-throughput capability, a pipeline is set up to characterize the ability in directing cell type specific expression in the brains of various transgenic mice generated by the Allen Institute as well as the broad scientific community. Through standardized, detailed, anatomical profiling of the transgene expression in the entire mouse brain, this dataset is intended to provide a comprehensive evaluation of the potential of each transgenic mouse line and help researchers choose the appropriate transgenic tools to study the function of different regions and/or cell types of the brain. This data release adds additional data to the existing set of new Cre-reporter lines generated at the Allen Institute that have stronger expression than other commonly used reporter lines are used to characterize approximately a dozen Cre-driver lines. The types of characterization data include digitized images (of sections sampling the entire brain) of colorimetric in situ hybridization (CISH), double fluorescent in situ

hybridization (DFISH), native fluorescence of XFP (generic term for fluorescent proteins of different colors), and immunohistochemical (IHC) labeling of marker genes.

Abbreviations: Allen Transgenic Study

Synonyms: Transgenic Mouse Study

Resource Type: atlas, data set, data or information resource

Keywords: expression, gene expression, brain, brain function, cell, colorimetric, in situ hybridization, double fluorescent, image, immunohistochemical, marker genes, mouse, mouse line, native fluorescence of xfp, neural circuits, transgenic mice, molecular neuroanatomy resource

Funding:

Resource Name: Allen Institute for Brain Science Transgenic Mouse Study

Resource ID: SCR_002999

Alternate IDs: nif-0000-00512

Record Creation Time: 20220129T080216+0000

Record Last Update: 20250412T054752+0000

Ratings and Alerts

No rating or validation information has been found for Allen Institute for Brain Science Transgenic Mouse Study.

No alerts have been found for Allen Institute for Brain Science Transgenic Mouse Study.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 4 mentions in open access literature.

Listed below are recent publications. The full list is available at dkNET.

Chen M, et al. (2021) Neuregulin-1-dependent control of amygdala microcircuits is critical for fear extinction. Neuropharmacology, 201, 108842.

Reilly MT, et al. (2012) Using genetically engineered animal models in the postgenomic era

to understand gene function in alcoholism. Alcohol research : current reviews, 34(3), 282.

Smedley D, et al. (2011) Cre recombinase resources for conditional mouse mutagenesis. Methods (San Diego, Calif.), 53(4), 411.

Madisen L, et al. (2010) A robust and high-throughput Cre reporting and characterization system for the whole mouse brain. Nature neuroscience, 13(1), 133.