TRM: Eph Receptor A4 (EphA4) Conditional Allele Mice

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BACKGROUND

Ephrins and Eph receptor tyrosine kinases are cell-surface molecules that serve a multitude of functions in cell–cell communication in development, physiology, and disease.

TECHNOLOGY DESCRIPTION

These *Epha4*^{flox} mutant mice possess *loxP* sites flanking exon 3 of the Eph receptor, A4 (*Epha4*) targeted gene. Mice that are homozygous for this allele are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. When these mutant mice are bred to mice that express Cre recombinase, resulting offspring will have exon 3 deleted in the process-rich layers of the hippocampus. This strain may be useful for studying axon guidance, spine morphogenesis, synaptic plasticity, neuronal circuitry (including that of the central pattern generator), neural injury and repair, vascular formation, and various cell-cell communications in and outside the nervous system.

APPLICATIONS

These floxed mutant mice possess *loxP* sites flanking exon 3 of the*Epha4* gene. This strain may be useful for generating conditional mutations in applications related to neuron development and inter-cellular communication especially in regards to role of EphA4 in physiology, injury and disease.

STATE OF DEVELOPMENT

The mice are designated Tangible Research Material (TRM). A complete description, including genotyping, phenotyping, etc is found at The Jackson Lab cat. No. 012916 https://www.jax.org/strain/012916

INTELLECTUAL PROPERTY INFO

Academic and non-profit institutions please order directly from The Jackson Laboratory. Commercial entities require a license from UC San Diego contact (https://innovation.ucsd.edu/contact/).

RELATED MATERIALS

▶ Herrmann JE, Pence MA, Shapera EA, Shah RR, Geoffroy CG, Zheng B. Generation of an EphA4 conditional allele in mice. Genesis. 2010 Feb;48(2):101-5. doi: 10.1002/dvg.20587. - 02/01/2011

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OTHER INFORMATION

KEYWORDS

Mice, EphA4, conditional allele, neural development, neural plasticity, cell-cell signaling

CATEGORIZED AS

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