Mouse Information

Common Name: rick

MGI Official Name: Rictor

Description: These mice carry a conditional allele for Rictor, a component of mTOR complex 2 (mTORC2). Disruption of the Rictor gene attenuates phosphorylation of Ser473 of Akt/PKB, which is important for a normal response to growth factor stimulation acting through the PI3-kinase signaling pathway.

Categories: Cre-lox floxed alleles

Genetic Alterations

1) Targeted Mutagenesis

Type of Allele: Conditional Null

Targeted Gene: Rictor (4921505C17Rik - NCBI GeneID:78757)

Targeted Allele: targeted mutation 1.1 (4921505C17Riktn1.1Mgn - MGI:3703321)

Description of Targeting Vector: A conditional allele was generated using a 3 loxP plus 2 FRT site strategy in which 2 FRT sites flank partial exon 3, which is linked to the lacZ reporter plus a neoR cassette. 2 loxP sites flank the neoR cassette and the third loxP flanks exon 3 of the gene. Mice containing the RiklacZ+neo target were subsequently bred to Flpe transgenics. The resulting mice contain intact exon3 flanked by loxP sites and one remaining FRT site. Genotype by DNA PCR utilizing 5’-ACTGAATATGTTCATGGTTGTG-3’ and 5’-GAAGTTATTCAGATGGCCCAGC-3’. These primers amplify a 554 bp targeted allele and a 466 bp wild type allele.

Targeting Vector Genbank File: pGEM-Pia-Target.gb

Citations

PubMedID Citation
16962829 Multicatletic disruption of the rictor gene in mice reveals that mTOR complex 2 is essential for fetal growth and viability. (2006) Dev Cell 11: 583-9 (Added 2008-03-29 17:02:54)

Strain Information

Strain Type: Insipient congenic

Chimera/Founder Genetic Background: 129S6/SvEvTac

Current Genetic Background: C57BL/6J (date recorded: 04/23/2015)

Strain Description: Mice containing the Riklox-null allele were bred to Flpe-expressing transgenic mice. The offspring contain an intact exon 3 flanked by tandem loxP sites and a residual FRT site. This allele is also called ricknull or ricklox/

Associated Images

Image 1
Diagram of the recombinase-mediated gene conversion strategy and the structure of four different allelic variants of the rictor gene. The parental rictoracrZ+neo allele generated by gene targeting contains both a lacZ cassette fused to exon 3 and an intact exon 3.

Reference: 16962829

Repositories

MMRRC

| Stock #: 014113-UNC | Availability Notes: Not provided |

BCBC members may Login to request this resource.

Contact Information

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Associated Publications

| Citation | Multi-allelic disruption of the rictor gene in mice reveals that mTOR complex 2 is essential for fetal growth and viability. (2006) Dev Cell 11: 583-9 (Added January 07, 2012) |

Comments

There are no comments for this entry.