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Rosa26$^{mIre1.N906A.Cherry}$ - Mouse Strain RES4560

Mouse Information

Common Name:	Rosa26$^{mIre1.N906A.Cherry}$
MGI Official Name:	Rosa26$^{mIre1.N906A.CherryMgn}$
Description:	This mouse contains bidirectional TetO-regulated genes inserted into the Rosa26.LCA allele by RMCE. In one direction the TetO/CMV promoter drives the expression of point mutant (N906A) of IRE1, an ER transmembrane kinase response to unfolded protein response (UPR). In the other direction it drives the expression of red fluorescent protein mCherry. This mouse can be used to simultaneously over-express Ire1 (N906A) and mCherry upon administration of doxycyline when the effector protein rtTA is expressed. This line can be used to study the roles of IRE1 in the response to ER stress, diet induced obesity and insulin resistance.
Categories:	Fluorescent Probes Tet

Genetic Alterations

1) RMCE Targeted Mutagenesis	
Type of Allele	Cassette Acceptor
Targeted Gene	gene trap ROSA 26, Philippe Soriano (Gt(ROSA)26Sor - NCBI GeneID:14910)
Targeted Allele	targeted mutation 1 (Rosa26$^{tm1(LCA)}$ - MGI:104735)
Description of Targeting Vector	The Rosa 26 cassette acceptor allele was created by replacing a 5.165 kb region of this gene containing exon 1 with a floxed tk-neo cassette, a puromycin-delta-thymidine kinase fusion gene driven by the mouse phosphoglycerol kinase promoter (pU-deltaTK) and a neomycin resistant gene driven by the bacterial EM7 promoter (EM7neo) flanked by minimal (34 bp) tandemly oriented lox71 and lox2272 sites.
Targeting Vector Genbank File	pRosa26.LCA.gb
Recombinase-Mediated Cassette Exchange Stage	
Type of Allele:	Gene Replacement
Exchanged Cassette Gene	gene trap ROSA 26, Philippe Soriano (Gt(ROSA)26Sor - NCBI GeneID:104735)
Exchanged Cassette Allele Name	Rosa26.mIre1.N906A.Cherry
Description of Exchange Vector	The phygro.71.2272.mIre1N906A.Cherry exchange vector was made on a backbone of a basal exchange vector which contains Lox71/Lox2272 sites and a flrted (flanked by FRT) Pgk-Hygro cassette for positive selection of ES cells after RMCE. Bidirectional Tet-O regulated genes mCherry and Ire1(N906A) were inserted between Pgk-Hygro and Lox2272 site.
Exchange Vector Genbank File:	phygro66.2272..mIre1N906A.cherry.gb
Citations	Not Available

Strain Information

Strain Type:	Mixed

Access Status

This resource is publicly viewable.

Request this Resource

Request from a **repository**

Primary contributor: **Papa Lab**
Co-contributed by:
- BCBC Mouse / ES Cell Core

Resource Tags

mouse, mouse strain, Rosa26$^{mIre1.N906A.Cherry}$, Rosa26$^{mIre1.N906A.CherryMgn}$

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Resource History & Actions

Approved on Feb 21, 2013
Last modified on Jan 30, 2013

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No matching resources

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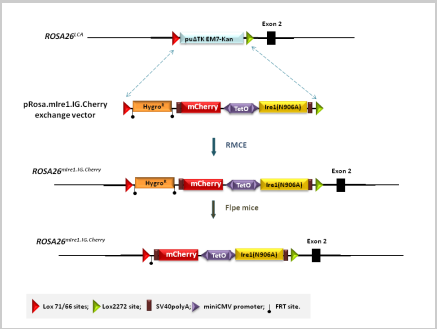
Data courtesy of dkCOIN. Only public resources are displayed.

Chimera/Founder Genetic Background:	129S6/SvEvTac
Current Genetic Background:	C57BL/6J (date recorded: 11/27/2012)
Strain Description:	Not provided

Associated Images

Image 1



Description:
Not provided

Reference:
Not provided

Repositories

Papa Lab

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Stock #: *Not provided*
Availability Notes: *Not provided*

Contact Information

Preferred Contact

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Associated Publications

No publications associated

Comments

There are no comments for this entry.

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