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Rosa26$^{(EN.Cherry.Neo)Mgn}$ - Mouse Strain RES4020

Mouse Information

Common Name:	Rosa26$^{(EN.Cherry.Neo)Mgn}$
MGI Official Name:	Rosa26^{tm2Mgn}
Description:	This mouse line expresses mCherry, a red fluorescent protein, under control of the endogenous ROSA26 gene locus. This mouse was generated as part of a study to identify the optimal combination of regulatory elements for fluorescent protein expression from a single gene copy.
Categories:	Fluorescent Probes

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	Not provided. (EN.Cherry)
Exchanged Cassette Allele Name	Rosa26$^{EN\text{-}Cherry\text{-}Neo}$
Description of Exchange Vector	not available
Exchange Vector Genbank File:	pRosa.EN.Cherry.bGsplicepA.neo.gb
Citations	Not Available

Strain Information

Strain Type:	Mixed
Chimera/Founder Genetic Background:	129S6/SvEvTac
Current Genetic Background:	C57BL/6J (date recorded: 12/14/2011)
Strain Description:	This strain is of a mixed genetic background that is approximately 50% 129S6 and 50% C57BL/6J.

Associated Images

Image 1

Description:

This figure shows how this line of mice was made. Coding sequences for a red (mCherry) fluorescent protein gene were

Access Status

This resource is publicly viewable.

Request this Resource

Request from a repository

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

Resource Tags

mouse, mouse strain, Rosa26$^{(EN.Cherry.Neo)Mgn}$, Rosa26^{tm2Mgn}

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Resource History & Actions

Approved on Mar 05, 2011
Last modified on Oct 21, 2013

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Related resources

BCBC

No matching resources

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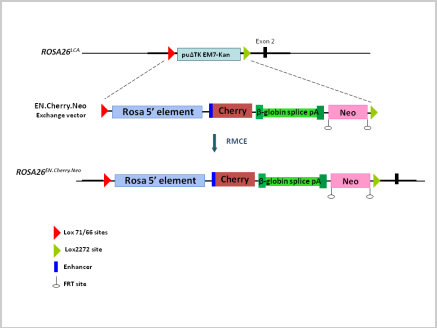
No matching resources

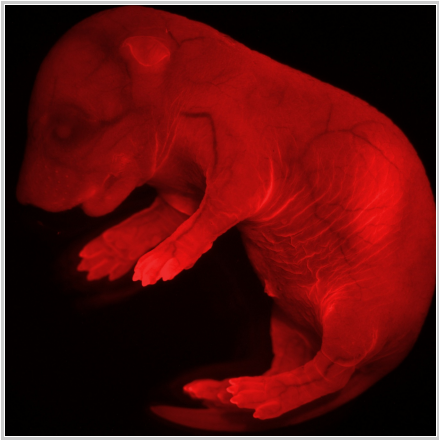
Data courtesy of dkCOIN. Only public resources are displayed.



inserted into an exchange cassette that allowed RMCE into a ROSA26 [LCA] allele. In this manner, mCherry is constitutively expressed under control of the endogenous ROSA26 promoter. The exchange plasmid also contains a 51 bp translational enhancer (5' leader sequence from Xenopus beta-globin gene), a Kozak sequence upstream of the start codon, and intronic and polyA sequences from the rabbit beta-globin gene that confer stability to the mRNA.

Reference:
Not provided

Image 2

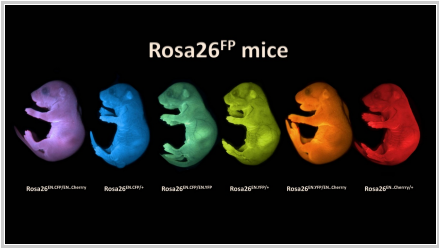


Description:

The image of *Rosa26*$^{Cherry/+}$ mouse was taken with a stereoscope using RFP filter.

Reference:
Not provided

Image 3



Description:

The images of newborn offspring from intercrosses of *Rosa26*$^{Cherry/+}$,*Rosa26*$^{CFP/+}$ *and Rosa26*$^{YFP/+}$ mice were taken with a stereoscope using CFP, YFP and RFP filter and subsequently overlayed.

Reference:
Not provided

Repositories

Magnuson Lab

Out of stock

Stock #: VUMC, NI BSID 0092
Availability Notes: Sperm cryo

MMRRC

Request via www.mmrrc.org website

Stock #: 036286-UCD
Availability Notes: *Not provided*

Contact Information

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Associated Publications

Publication	Citation
21324933	Chen SX, Osipovich AB, Ustione A, Potter LA, Hipkens S, Gangula R, Yuan W, Piston DW, Magnuson MA Quantification of factors influencing fluorescent protein expression using RMCE to generate an allelic series in the ROSA26 locus in mice. (2011) *Dis Model Mech* **4**: 537-47 (Added September 24, 2012)

Comments

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