Rosa26\textbf{(EN.Cherry.Neo)Mgn} - Mouse Strain RES4020

**Mouse Information**

- **Common Name:** Rosa26\textbf{(EN.Cherry.Neo)Mgn}
- **MGI Official Name:** Rosa26\textbf{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 (\textbf{Gt(ROSA)26Sor} - NCBI GeneID:14910)
- **Targeted Allele:** targeted mutation 1 (Rosa26\textbf{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. (\textbf{EN.Cherry})
- **Exchanged Cassette Allele Name:** Rosa26\textbf{EN-Cherry-Neo}
- **Description of Exchange Vector:** not available

**Exchange Vector Genbank File:** pRosa \textbf{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
inserted into an exchange cassette that allowed RMCE into a ROSA26 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 Rosa26Cherry/+ mouse was taken with a stereoscope using RFP filter.
Reference:
Not provided

Image 3
Description:
The images of newborn offspring from intercrosses of Rosa26Cherry/+ , Rosa26CFP/+ and Rosa26YFP/+ 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
Stock #: 036286-UCD
Availability Notes: Not provided

Contact Information
Preferred Contact
Name: Mark Magnuson
Institution: Vanderbilt University
Phone: 615-322-7006
Email: mark.magnuson@vanderbilt.edu

Associated Publications
Publication: 21324933

Comments