

Coding sequences for a cerulean (CFP) fluorescent protein gene were inserted into the exchange cassette. In this manner, CFP is constitutively expressed under control of the endogenous ROSA26 promoter. The exchange plasmid also contains a 51bp translational enhancer (5' leader sequence from *Xenopus* beta-globin), a Kozak sequence upstream of the start codon, and intronic polyA sequences from the rabbit beta-globin gene that confer stability to the mRNA.

Keywords: [Rosa26](#) [fluorescent reporter](#) [CFP](#)

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Mouse Information

Common Name	Rosa26 ^{CFPMgn}
Research Applications	Fluorescent proteins
MMRRC ID	036288-MU
Jackson Laboratories Stock No	<i>Not provided</i>
VCMR ID	NH
Additional Strain Information	<i>Not provided</i>

Genetic Alteration


Mutation #1: RMCE Targeted Mutagenesis	
Type of Allele	Cassette Acceptor
Targeted Gene	Name: gene trap ROSA26, Philippe Soriano Symbol: Gt(ROSA)26Sor NCBI: 14910
Allele	Name: targeted mutation 1 Symbol: Rosa26 MGI: MGI:5287869
Description of Targeting Vector	This mouse line contains a loxed cassette acceptor (LCA) allele in which a 5.17 kb region of the gene has been replaced by a lox71 site, a puromycin-(delta)-thymidine kinase fusion gene driven by the mouse phosphoglycerol kinase promoter, a kanamycin resistance gene driven by the bacterial EM7 promoter, and a lox2272 site. These features enable use of Recombinase-Mediated Cassette Exchange (RMCE) for the rapid insertion of various DNAs into the Rosa26 gene locus.
Vector Genbank File	pRosa26.LCA.gb

Allele Map	<i>Not Provided</i>
PCR Genotyping Protocol	<i>Not provided</i>
Type of Allele	Global Null
Exchanged Cassette Gene Name	()
Exchanged Cassette Allele Name	pRosa.EN.CFP.bGspliceA.Neo
Description of Exchange Vector	The pRosa.EN.CFP.bGspliceA.Neo exchange vector was made on a backbone of a basal exchange vector which contains a 4.081 kb sequence from the Rosa26 locus, Lox71/Lox2272 sites, and a flrtd (flanked by FRT) P _{gk} -Neo cassette that is used for positive selection of ES cells after RMCE. A 5' translational enhancer-CFP-intron-containing rabbit beta-globin polyA sequence was inserted (in place of Rosa26 exon 1), between the Lox71 and the P _{gk} -Neo sites.
Exchanged Cassette Genbank File	pRosa.EN.CFP.bGspliceA.neo1.gb
PCR Genotyping Protocol	<i>Not provided</i>
Citations	<p>Publication</p> <hr/> <p>Quantification of factors influencing fluorescent protein expression using RMCE to generate an allelic series in the ROSA26 locus in mice. (2011) <i>Dis Model Mech</i> 4: 537-47 (Added 11/8/2013) PMID: 21324933</p>

Background Strain Information


Strain Type	Mixed
Chimera/Founder Genetic Background	129S6/SvEvTac
Current Genetic Background	C57BL/6J
Number of Generations Backcrossed	4
Strain Description	Founder chimeras were crossed with C57Bl/6J for 4 generations.

Attachments

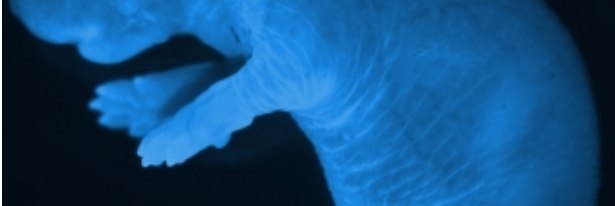
 [6_colors_of_mice.jpg](#) - Added on October 23, 2013 at 4:03 PM by [Anna Osipovich](#)


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 overlaid.



 [CFPalone2.jpg](#) - Added on October 23, 2013 at 4:02 PM by Anna Osipovich

The image of Rosa26CFP/ mouse was taken with a stereoscope using CFP filter.



 [R26_EN_CFP_RMCEs.png](#) - Added on February 7, 2012 at 1:36 PM by Jody Peters

Linear Map of Targeting Event

