

This mouse line was made by RMCE in the Rosa26.LCA allele and exhibits yellow fluorescent protein (YFP, Citrine) expressed under control of the ROSA26 promoter. The YFP sequence is preceded by a translational enhancer and is followed by intron-containing rabbit b-globin polyA sequences. This mouse ubiquitously expresses YFP protein and can be used for transplantation and other experiments where tracing of source cells is required.

Keywords: [YFP](#) [Rosa26](#) [RMCE](#) [fluorescent reporter](#)

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Mouse Information

Common Name	Rosa26 ^{YFP}
Research Applications	Fluorescent proteins
MMRRC ID	036289-MU
Jackson Laboratories Stock No	<i>Not provided</i>
VCMR ID	NJ
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 ^{tm1(LCA)} MGI: MGI:5287870
Description of Targeting Vector	This ES cell line contains a loxed cassette acceptor (LCA) allele in which a 5.17kb region of the gene has been replaced by a lox71 site, a puromycin-(delta)-thymidine kinase fusion gene driven by the mouse phosphoglycerol kinase promoter, a kanamycin resistance gene driven by the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	YFP
Description of Exchange Vector	The pRosa.EN.YFP.bGspliceA.Neo 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) Pgk-Neo cassette that is used for positive selection of ES cells after RMCE. A 5' translational enhancer-YFP- intron-containing rabbit beta-globin polyA sequence was inserted (in place of Rosa26 exon 1), between the Lox71 and Pgk-Neo sites.
Exchanged Cassette Genbank File	pRosa.EN.YFP.bGspliceA.neo.gb
PCR Genotyping Protocol	<i>Not provided</i>
Citations	<p>Publication</p> <p><u>Quantification of factors influencing fluorescent protein expression using RMCE to generate an allelic series in the ROSA26 locus in mice.</u> (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	3
Strain Description	After germline transmission, founder chimeras 129S6 were bred to C57Bl/6J mice for 3 generations.

Attachment

 [R26_EN_YFP_RMCEs.png](#) - Added on February 7, 2012 at 1:44 PM by Jody Peters

Linear Map of Exchange Event

