B6.129S6-Gt(ROSA)26Sor$^{tm1.1(R26\text{-}60\text{-}DR5\text{-}TA\text{-}Cerulean)Mgn}$/Vu

VANDERBILT UNIVERSITY labnodes

This is a retinoic acid responsive CFP reporter allele. In this allele, the Rosa26 promoter was modified using RMCE, replacing DNA sequences from -60 to +81 with a multimerized retinoic acid response element (DR5) fused to a TATA box.

Keywords: Rosa26$^{R26\text{-}60\text{-}DR5\text{-}TA\text{-}Cerulean}$ | Mgn | Rosa26 | RMCE | Cerulean

Expand

Mouse Information

Common Name	Rosa26$^{R26\text{-}60\text{-}DR5\text{-}TA\text{-}Cerulean}$
Research Applications	*Not provided*
MMRRC ID	*Not provided*
Jackson Laboratories Stock No	*Not provided*
VCMR ID	KV
Additional Strain Information	Through homologous recombination in ES cells, a 5.165 kb region of the Rosa26 gene containing exon 1 was replaced by a floxed tk-neo cassette, a puromycin-delta-TK fusion gene driven by the mouse phosphoglycerol kinase promoter (puroR-delta-TK) and a neomycin resistant gene driven by the bacterial EM7 promoter (EM7neo) flanked by minimal (34 bp) tandemly oriented lox71 and lox2272 sites (Cre-recombinase recognition sequences).

Genetic Alteration

Mutation #1: RMCE Targeted Mutagenesis

Type of Allele	Gene Replacement
Targeted Gene	Name: gene trap ROSA 26, Philippe Soriano Symbol: Gt(ROSA)26Sor NCBI: 14910
Allele	Name: targeted mutation 1.1 Symbol: Gt(ROSA)26Sor$^{tm1.1(R26\text{-}60\text{-}DR5\text{-}Cerulean)Mgn}$
Description of Targeting Vector	Through homologous recombination in ES cells, a 5.165 kb region of the Rosa26 gene containing exon 1 was replaced by a floxed tk-neo cassette, a puromycin-delta-TK fusion gene driven by the mouse phosphoglycerol kinase promoter (puroR-delta-TK) and a neomycin resistant gene driven by the bacterial EM7 promoter (EM7neo) flanked by minimal (34 bp) tandemly oriented lox71 and lox2272 sites (Cre-recombinase recognition sequences).

Vector Genbank File	pRosa26.LCA.gb
Allele Map	*Not Provided*
PCR Genotyping Protocol	R2660_and_228_genotyping_protocol.docx
Type of Allele	Gene Replacement
Exchanged Cassette Gene Name	(CFP)
Exchanged Cassette Allele Name	Rosa26{tm1.1(R26-DR5-TA-Cerulean)}
Description of Exchange Vector	In the R26-60-DR5-TA-Cerulean exchange vector a native Rosa26 gene sequence from -60 to +81 is replaced by a retinoic acid response element (DR5) fused to a TATA-Cerulean(CFP) fluorescent reporter. The vector also contains RMCE-enabling Lox66/Lox2272 sites and Pgk-hygromycin resistance cassette flanked by tandem FRT sites, enabling excision of the cassette after germline transmission.
Exchanged Cassette Genbank File	R26-60-DR5-TA-Cerulean.gb
PCR Genotyping Protocol	*Not provided*
Citations	**Publication** Partial promoter substitutions generating transcriptional sentinels of diverse signaling pathways in embryonic stem cells and mice. (2012) *Dis Model Mech* **5**: 956-66 (Added 11/6/2013) PMID: 22888097

Background Strain Information

Strain Type	Congenic Strain
Chimera/Founder Genetic Background	129S6/SvEvTac
Current Genetic Background	C57BL/6J
Number of Generations Backcrossed	2

Strain Description	Germline 129S6 chimeras were backcrossed to C57BL6/J for two generations. 96.97% C57Bl6/J at cryopreservation. Cryopreserved in 2010.

Attachments

r2660dr5tacerh_pcr_protocol.doc - Added on July 27, 2010 at 1:55 PM by Jill Lindner

PCR protocol for genotyping mice

R26-60-DR5-TA-Cerulean.png - Added on July 19, 2010 at 10:17 AM by Mark Magnuson

Rosa26-60-DR5-TA-Cerulean gene targeting and RMCE strategy.