

B6.129S6-Gt(ROSA)26Sor^{tm1.2(R26-228-DR5-TA-Cerulean)}Mgn/Vu

These mice were generated using RMCE to insert an exchange vector containing a modified Rosa26 promoter linked to a Cerulean fluorescent protein (CFP) reporter gene into mESCs containing a Loxed Cassette Acceptor (LCA) allele within the Rosa26 gene locus. The Rosa26 promoter in this mouse was altered by replacing DNA sequences from 228 to +81 with a multimerized retinoic acid response element (DR5) fused to a TATA box. This mouse will facilitate studies of retinoic acid signaling in an intact animal.

Keywords: [Rosa26^{R26-228-DR5-TA-Cerulean}](#) [Rosa26](#) [RMCE](#) [Cerulean](#) [Mgn](#)

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Mouse Information

Common Name	Rosa26 ^{R26-228-DR5-TA-Cerulean}
Research Applications	<i>Not provided</i>
MMRRC ID	<i>Not provided</i>
Jackson Laboratories Stock No	<i>Not provided</i>
VCMR ID	KW
Additional Strain Information	A Rosa26 RMCE plasmid constructed for use with the ES cell loci targeted by pRosa26.LCA. In this experiment native Rosa26 gene sequence from -228 to +81 was replaced by a retinoic acid response element (DR5) fused to a TATA-Cerulean red reporter. The resulting mouse ESCs will enable the feasibility of inserting signaling sentinel cassettes into a facilitating chromosomal locus to be directly tested.

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 1.2 Symbol: Gt(ROSA)26Sor ^{tm1.2(R26-228-DR5-Cerulean)} Mgn

Description of Targeting Vector	A Rosa26 RMCE plasmid constructed for use with the ES cell loci targeted by pRosa26.LCA. In this experiment native Rosa26 gene sequence from -228 to +81 was replaced by a retinoic acid response element (DR5) fused to a TATA-Cerulean red reporter. The resulting mouse ESCs will enable the feasibility of inserting signaling sentinel cassettes into a facilitating chromosomal locus to be directly tested.
Vector Genbank File	pRosa26.LCA.gb
Allele Map	<i>Not Provided</i>
PCR Genotyping Protocol	R2660_and_228_genotyping_protocol.docx
Type of Allele	Gene Replacement
Exchanged Cassette Gene Name	tumor necrosis factor receptor superfamily, member 10b (DR5)
Exchanged Cassette Allele Name	Rosa26{LCA}
Description of Exchange Vector	Not Provided
Exchanged Cassette Genbank File	R26-228-DR5-TA-Cerulean.gb
PCR Genotyping Protocol	<i>Not provided</i>
Citations	<p>Publication</p> <p>Partial promoter substitutions generating transcriptional sentinels of diverse signaling pathways in embryonic stem cells and mice. (2012) <i>Dis Model Mech</i> 5: 956-66 (Added 11/6/2013) PMID: 22888097</p>


Background Strain Information

Strain Type	Congenic Strain
Chimera/Founder Genetic Background	129S6/SvEvTac
Current Genetic Background	C57BL/6J
Number of Generations Backcrossed	2 generations backcrossed to C57BL6/J
Strain Description	129S6 germline chimeras were backcrossed for two generations to C57BL/6J. 93.75% C57Bl6/J at cryopreservation. Cryopreserved in 2010. IVF 2017 32.38% fertilization rate.

Attachments

 [r26228dr5tacerh_pcr_protocol.doc](#) - Added on July 27, 2010 at 2:11 PM by Jill Lindner

PCR protocol for genotyping mice

 [R26-228-DR5-TA-Cerulean.png](#) - Added on July 19, 2010 at 10:17 AM by Mark Magnuson

