ESC Line Information

**Cell Line Name:** Rosa26\(^{EN-CFP-Neo}\)  
**Parental Cell Line:** TL-1 / Rosa26(LCA) clone 5B9  
**Background Strain:** 129  
**Culturing Protocol:** std_mesc_culture.doc  
**Description:** This ES cell line contains CFP (Cerulean) inserted into a Rosa26 LCA allele by recombinase mediated cassette exchange. These cells were used to identify the optimal arrangement of regulatory elements for fluorescent protein expression from a single genomic copy.

**Genetic Alterations**

1) RMCE Targeted Mutagenesis

**Type of Allele:** Cassette Acceptor  
**Targeted Gene:** gene trap ROSA26, Philippe Soriano (Gt(ROSA)26Sor - NCBI GeneID:14910)  
**Targeted Allele:** targeted mutation 1 (Rosa26\(^{tm1(LCA)}\) - MGI:104735)  
**Description of Targeting Vector:** The Rosa26 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. (CFP)  
**Exchanged Cassette Allele Name:** Rosa26\(^{EN-CFP}\)  
**Description of Exchange Vector:** not available  
**Exchange Vector Genbank File:** prosa.en.cfp.bppsplicea.neo.gb

**Citations**

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**Associated Images**

Image 1

Description: A cyan (Cerulean) fluorescent protein gene was placed under control of a 4 kb Rosa 26 promoter element. The exchange cassette also has a 51 bp translational
 enhancer (5' leader sequence from Xenopus beta-globin gene), a Kozak sequence upstream of the start codon, which is followed by intronic region and polyA site from the rabbit beta globin gene.

Reference: Not provided