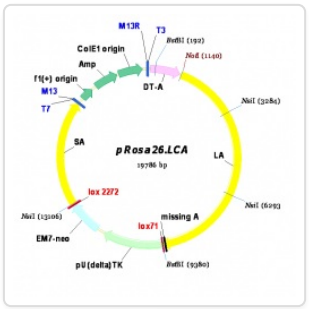
pRosa26.LCA

A targeting vector for the Rosa26 gene was constructed using the recombineering approach and utilizing the Cre-lox system for future RMCE manipulations. The long and short arm Rosa26 fragments (LA & SA) are 8.232 kb and 3.770 kb respectively and were derived from a RP22 BAC clone (#58-D17). A 5.165 kb region between these arms has been replaced by the floxed tk-neo cassette, a puromycin-Δ-thymidine kinase fusion gene driven by the mouse phosphoglycerol kinase promoter (pUDTK) and a kanomycin resistant gene driven by the bacterial EM7 promoter (EM7-kan) flanked by minimal (34 bp) tandemly oriented lox71 and lox2272 sites (Cre-recombinase recognition sequences). The construct also contains a diphtheria toxin negative selection cassette (pgk-DT-A). It should be noted that the LA contains a single base difference in what is contained in this targeting vector plasmid and the predicted sequence derived from MGI database: database predicts a 17 bp run of "A's" at position 9274 of the targeting vector plasmid; the sequence data confirms only 16-A's here in the plasmid.

Keywords: Rosa26 | RMCE | Puromycin | EM7

Expand

Vector Annotations

Vector Map	 Zoom in Save original
Genbank File	pRosa26.LCA.gb
Backbone Vector	pBluescript KS+
Construct Size	19,786 bp (approximate)
Bacterial Stock	No
Storage Temperature	-20°C
Stock Concentration	0.1 µg/µL
Addgene	*Not Provided*

Source

Laboratory	Mark Magnuson
Made by	Xuan Li
Stock Date	February 10, 2009

Inventory Location

Private

Publications / Citations

1. Quantification of factors influencing fluorescent protein expression using RMCE to generate an allelic series in the ROSA26 locus in mice. Chen SX, Osipovich AB, Ustione A, Potter LA, Hipkens S, Gangula R, Yuan W, Piston DW, Magnuson MA (2011) *Dis Model Mech* **4(4)**: 537-47
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MeSH Terms

Alleles | Animals | Chromosomes, Artificial, Bacterial | Embryo, Mammalian | Embryonic Stem Cells | Fluorescence | Genetic Loci | Genetic Vectors | Luminescent Proteins | Mice | Mutagenesis, Insertional | Organ Specificity | Proteins | Rabbits | Recombinases | RNA, Untranslated