ESC Line Information

Cell Line Name: Foxa2LCA
Parental Cell Line: TL-1
Background Strain: 129
Culturing Protocol: Std mESC Culture.doc
Description: This ES cell line contains a loxed cassette acceptor (LCA) allele that may be utilized for the exchange of DNAs of interest into the Foxa2 locus by recombinase mediated cassette exchange (RMCE). This LCA uses a Lox66/71 and Lox2272 strategy for RMCE and allows for manipulation of a 4.7 kb region of the gene (contains a promoter and all exons: exon 1, 2 and 3). This leads to a variety of experiments that can be performed using a wide range of cassette designs.

Genetic Alterations

1) Targeted Mutagenesis

Type of Allele: Cassette Acceptor
Targeted Gene: forkhead box A2 (Foxa2 - NCBI GeneID:15376)
Targeted Allele: Forkhead box A2 loxed cassette acceptor (Foxa2LCA)

Description of Targeting Vector: The pFoxa2LCA targeting vector is made by BAC recombineering and contains 7762bp 5' and a 4009bp 3' homology arms. 5' homology arm is followed by Lox66 site, flrted (FRT flanked) Pgk-PUdTK-EM7-Neo selection marker and lox2272 site. Pgk-PUdTK marker allows positive selection for targeting events with puromycin and negative selection for RMCE events with ganciclovir. EM7-Kanamycin cassette is used for positive selection in bacterial cells.

Targeting Vector Genbank File: pFoxa2LCA.gb

Citations: Not Available

Associated Images

Image 1

Description: Homologous recombination in mouse ES cells was performed to generate a loxed cassette acceptor allele (LCA). This ES cell line contains an LCA in which a 4.7 kb region (including the promoter and exons 1, 2 and 3) of the gene have been replaced by a lox71 site, a puromycin-(delta)-thymidine kinase fusion gene driven by mouse phosphoglycerol kinase promoter, a kanamycin resistance gene driven by the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 Foxa2 gene locus.

Reference:
Not provided

Repositories

Magnuson Lab

Stock #: Not provided
Availability Notes: Not provided

Contact Information

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Associated Publications

No publications associated

Comments

There are no comments for this entry.