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Rosa26^{mlre1.WT.Cherry} - ES Cell Line RES4023**ESC Line Information**

Cell Line Name:	Rosa26 ^{mlre1.WT.Cherry}
Parental Cell Line:	TL-1
Background Strain:	129
Culturing Protocol:	Std_mESC_Culture.doc
Description:	This mESC line contains a bidirectional Tet0-regulated fusion gene that has been inserted into a disabled Rosa26 loxed cassette acceptor allele by RMCE. In one direction the tetO/CMV promoter drives expression of a red fluorescent protein (Cherry) while in the other direction it drives the wild type form of mlre1. mlre1 is an endoplasmic reticulum (ER) membrane kinase response to unfolded protein response (UPR). Activated mlre1 endonucleases leads to the splicing of XBP-1 (a transcription factor which is upregulated in times of ER stress) which transcriptionally increases the expression of ER chaperones and alleviates UPR. This cell line should be useful for studying the role of mlre1 in the response to ER stress. By generating mice with this allele the role of mlre1 in diet induced obesity and insulin resistance can also be examined.

Genetic Alterations

1) RMCE Targeted Mutagenesis	
Type of Allele	Gene Replacement
Targeted Gene	Gt(ROSA)26Sor gene trap ROSA 26, Philippe Soriano [Mus musculus] (Gt(ROSA)26Sor - NCBI GeneID:14910)
Targeted Allele	targeted mutation 1 (Rosa26 ^{tm1.1(mlre1.WT.Cherry)FerozPapa})
Description of Targeting Vector	Not available
Targeting Vector Genbank File	pRosa26.LCA3.gb
Recombinase-Mediated Cassette Exchange Stage	
Type of Allele:	Not available
Exchanged Cassette Gene	Not provided. (MGI:14910)
Exchanged Cassette Allele Name	Rosa26 LCA
Description of Exchange Vector	Not provided
Exchange Vector Genbank File:	phygro66.2272.rv.wt.mlre1.cherry.gb
Citations	Not Available


Associated Images

Image 1


Description:
Not provided

Reference:
Not provided

Access Status

 This resource is publicly viewable.

Request this Resource

 Request from a repository

Primary contributor: [Papa Lab](#)
Co-contributed by:
• [BCBC Mouse / ES Cell Core](#)

Resource Tags

embryonic, es, esc, Rosa26^{mlre1.WT.Cherry}, stem, TL-1

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Resource History & Actions

Approved on Apr 19, 2011
Last modified on Dec 21, 2011

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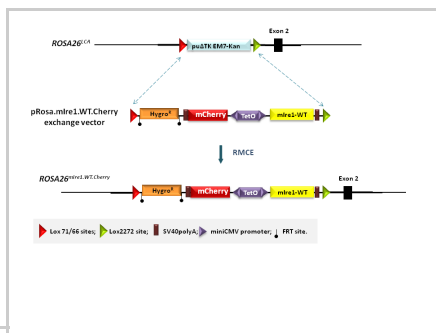
Related resources**BCBC**

No matching resources

Other Consortia

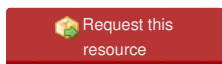
No matching resources

Data courtesy of [dkCOIN](#). Only public resources are displayed.



Repositories

Magnuson Lab



Stock #: *Not provided*
Availability Notes: *Not provided*

Contact Information

Preferred Contact

Name	Feroz Papa
Institution	University of California San Francisco
Phone	415-205-9751
Email	frpapa@medicine.ucsf.edu

Associated Publications

No publications associated

Comments

There are no comments for this entry.



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