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**Rosa26<sup>mlre1.IG.Cherry</sup> - ES Cell Line RES4024****ESC Line Information**

<b>Cell Line Name:</b>	Rosa26 <sup>mlre1.IG.Cherry</sup>
<b>Parental Cell Line:</b>	TL-1
<b>Background Strain:</b>	129
<b>Culturing Protocol:</b>	<a href="#">std_mesc_culture.doc</a>
<b>Description:</b>	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 a mutant version 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	
<b>Type of Allele</b>	Gene Replacement
<b>Targeted Gene</b>	Gt(ROSA)26Sor gene trap ROSA 26, Philippe Soriano [ Mus musculus ] (Gt(ROSA)26Sor - <a href="#">NCBI GeneID:14910</a> )
<b>Targeted Allele</b>	targeted mutation 1.1 (Rosa26 <sup>tm1.1(mlre1.IG.Cherry)FerozPapa</sup> )
<b>Description of Targeting Vector</b>	Not available
<b>Targeting Vector Genbank File</b>	<a href="#">pRosa26.LCA3.gb</a>
Recombinase-Mediated Cassette Exchange Stage	
<b>Type of Allele:</b>	Not available
<b>Exchanged Cassette Gene</b>	Not provided. ( <a href="#">MGI:14910</a> )
<b>Exchanged Cassette Allele Name</b>	Rosa26 LCA
<b>Description of Exchange Vector</b>	Not provided
<b>Exchange Vector Genbank File:</b>	<a href="#">phygro66.2272.rv.ig.mlre1.cherry.gb</a>
<b>Citations</b>	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<sup>mlre1.IG.Cherry</sup>, stem, TL-1

 Login to edit tags

 [Read more about tags](#)

**Resource History & Actions**

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

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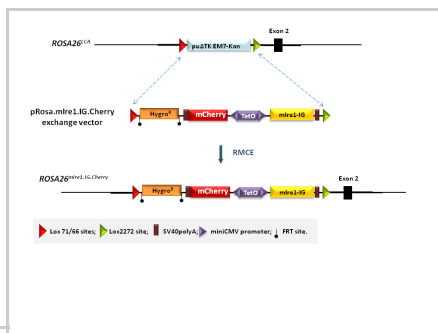
**Related resources****BCBC**

No matching resources

**Other Consortia**

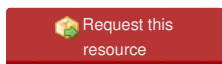
No matching resources

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



## Repositories

### Magnuson Lab



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

## Contact Information

### Preferred Contact

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## Associated Publications

*No publications associated*

## Comments

*There are no comments for this entry.*

