

Klrg1 Cas9-KO Strategy

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Reviewer:

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Project Overview

Project Name

Klrg1

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Klrg1* gene. The schematic diagram is as follows:



- The *Klrg1* gene has 1 transcript. According to the structure of *Klrg1* gene, exon2-exon4 of *Klrg1-201* (ENSMUST00000032207.8) transcript is recommended as the knockout region. The region contains 373bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Klrg1* gene. The brief process is as follows: CRISPR/Cas9 system

- According to the existing MGI data, Mice homozygous for a null allele have no abnormal phenotype.
- The *Klrg1* gene is located on the Chr6. If the knockout mice are crossed with other mice strains to obtain double gene positive homozygous mouse offspring, please avoid the two genes on the same chromosome.
- This Strategy is designed based on genetic information in existing databases. Due to the complexity of biological processes, all risk of the gene knockout on gene transcription, RNA splicing and protein translation cannot be predicted at the existing technology level.

Gene information (NCBI)

Klrg1 killer cell lectin-like receptor subfamily G, member 1 [Mus musculus (house mouse)]

Gene ID: 50928, updated on 31-Jan-2019

Summary



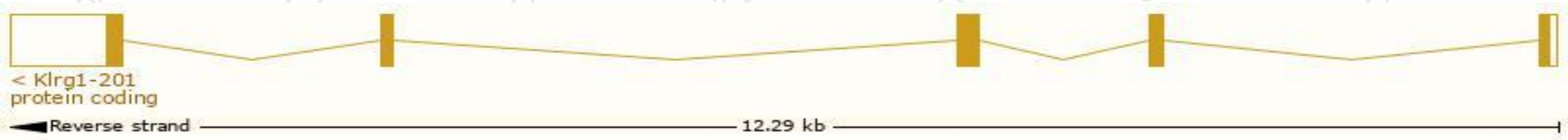
Official Symbol	Klrg1 provided by MGI
Official Full Name	killer cell lectin-like receptor subfamily G, member 1 provided by MGI
Primary source	MGI:MGI:1355294
See related	Ensembl:ENSMUSG00000030114
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2F1-Ag, MAFA, MAFA-L
Expression	Low expression observed in reference dataset See more
Orthologs	human all

Transcript information (Ensembl)

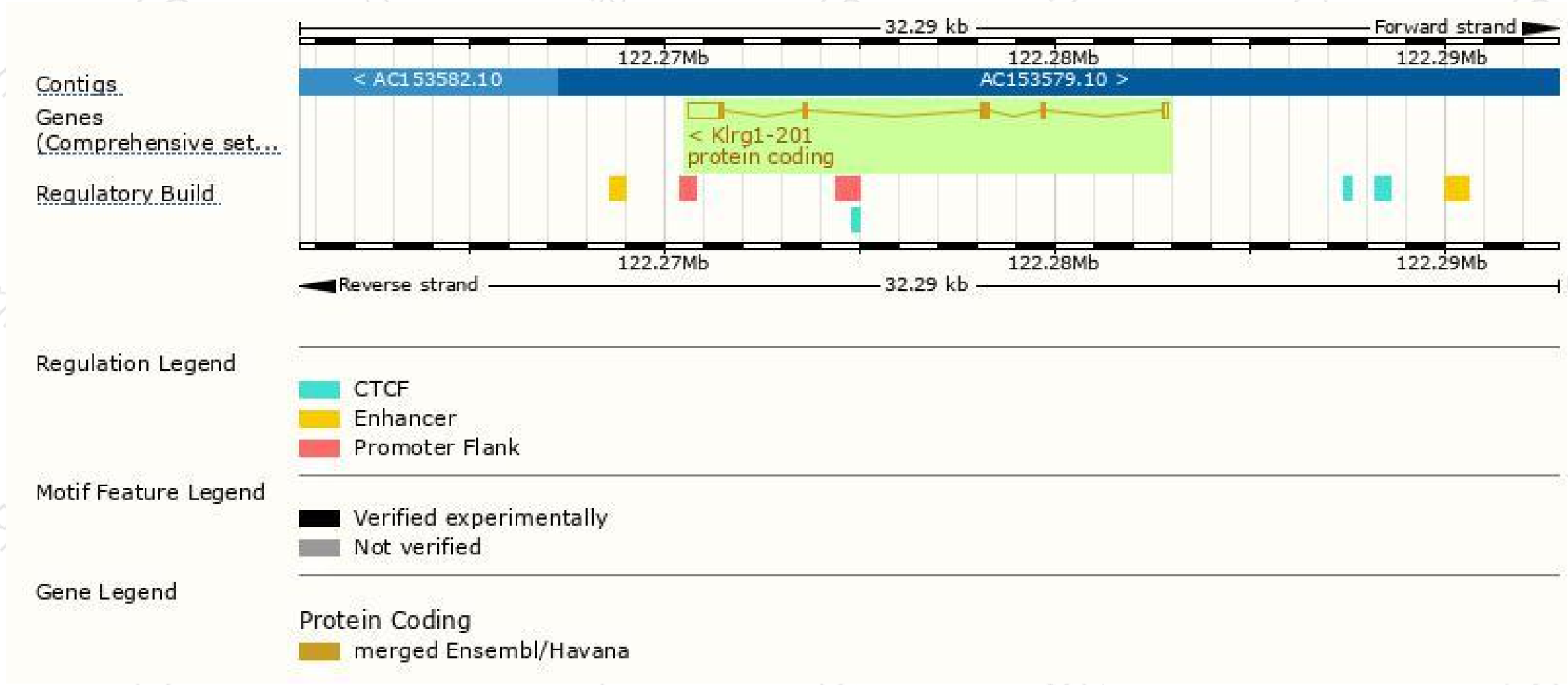
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Klrg1-201	ENSMUST00000032207.8	1414	188aa	Protein coding	CCDS20492	O88713	TSL:1 GENCODE basic APPRIS P1

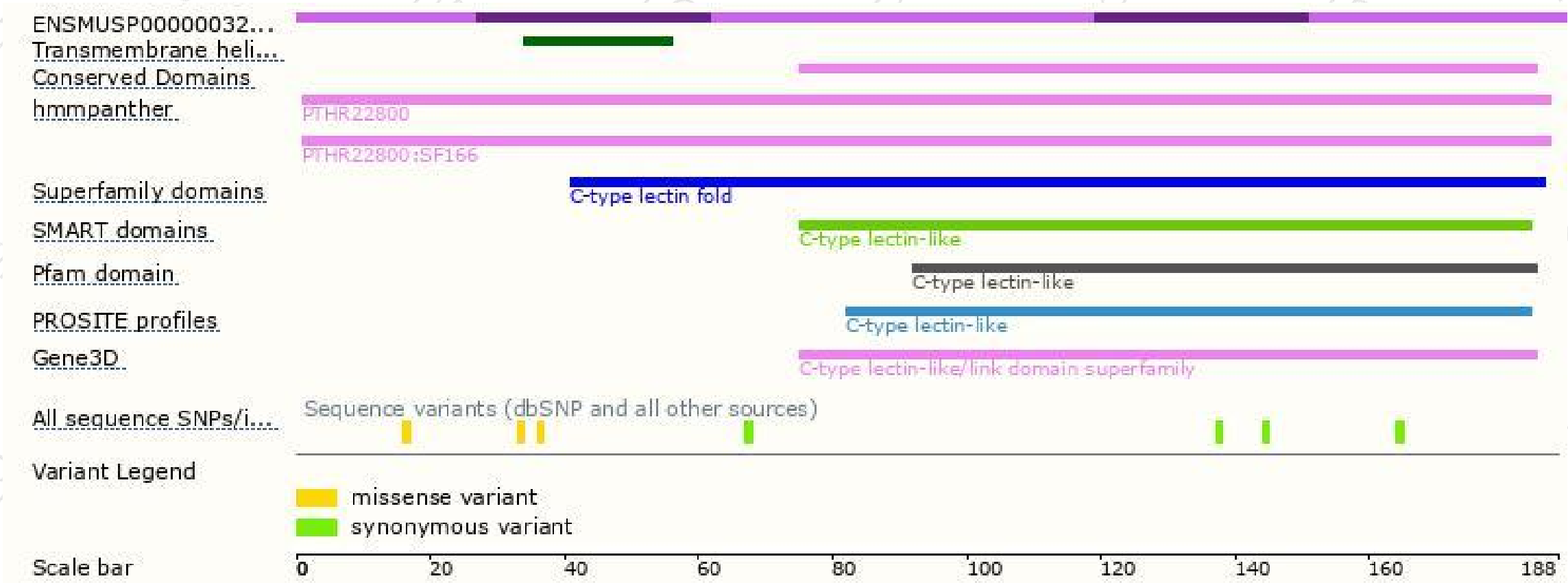
The strategy is based on the design of *Klrg1-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



If you have any questions, you are welcome to inquire.

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