

Gpr135 Cas9-KO Strategy

Designer: Xueting Zhang

Design Date: 2019-8-5

Project Overview

Project Name

Gpr135

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Gpr135* gene. The schematic diagram is as follows:



- The *Gpr135* gene has 1 transcript. According to the structure of *Gpr135* gene, exon1 of *Gpr135-201* (ENSMUST00000050649.5) transcript is recommended as the knockout region. The region contains all of the coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Gpr135* gene. The brief process is as follows: CRISPR/Cas9 system

- The knockout region is near to the C-terminal of *L3hypdh* gene, this strategy may influence the regulatory function of the C-terminal of *L3hypdh* gene.
- The *Gpr135* gene is located on the Chr12. 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)

Gpr135 G protein-coupled receptor 135 [Mus musculus (house mouse)]

Gene ID: 238252, updated on 16-Feb-2019

Summary



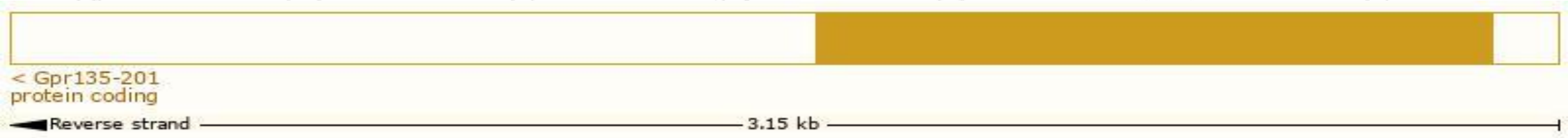
Official Symbol	Gpr135 provided by MGI
Official Full Name	G protein-coupled receptor 135 provided by MGI
Primary source	MGI:MGI:2676315
See related	Ensembl:ENSMUSG00000043398
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	PAFR
Orthologs	human all

Transcript information (Ensembl)

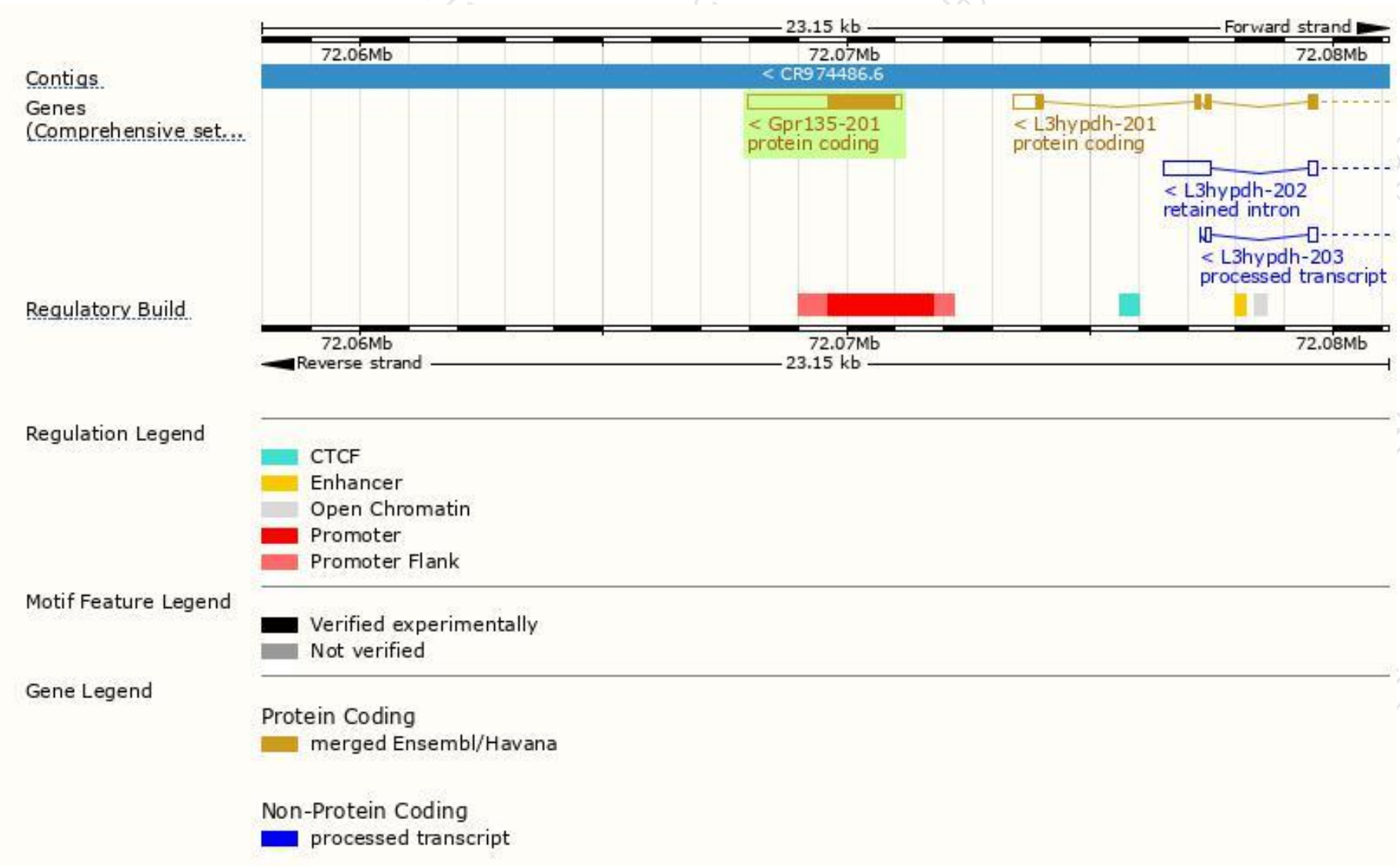
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Gpr135-201	ENSMUST00000050649.5	3150	457aa	Protein coding	CCDS25965	A7E1Z8 Q7TQP2	TSL:NA GENCODE basic APPRIS P1

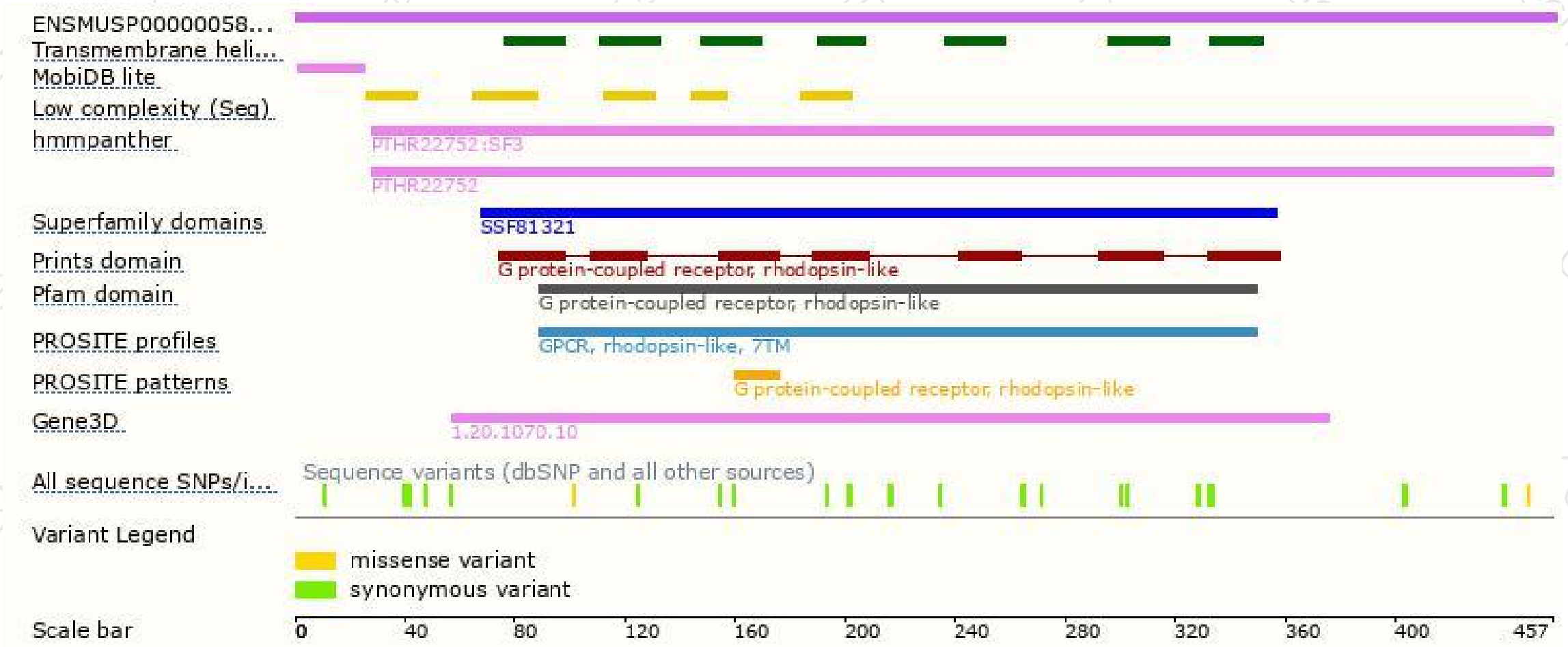
The strategy is based on the design of *Gpr135-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

