

Pdgfrl Cas9-KO Strategy

Designer: Qiong Zhou
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Project Overview

Project Name

Pdgfrl

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

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



- The *Pdgfrl* gene has 2 transcripts. According to the structure of *Pdgfrl* gene, exon2 of *Pdgfrl-201* (ENSMUST00000034004.9) transcript is recommended as the knockout region. The region contains 298bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Pdgfrl* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Pdgfrl* gene is located on the Chr8. 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)

Pdgfrl platelet-derived growth factor receptor-like [Mus musculus (house mouse)]

Gene ID: 68797, updated on 31-Jan-2019

Summary



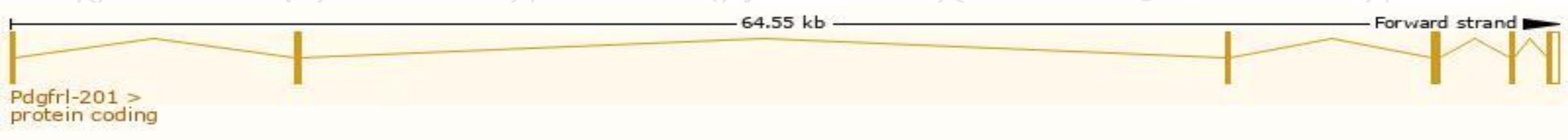
Official Symbol	Pdgfrl provided by MGI
Official Full Name	platelet-derived growth factor receptor-like provided by MGI
Primary source	MGI:MGI:1916047
See related	Ensembl:ENSMUSG000000031595
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	1110039P19Rik, AV013190
Expression	Broad expression in limb E14.5 (RPKM 12.0), bladder adult (RPKM 8.7) and 17 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

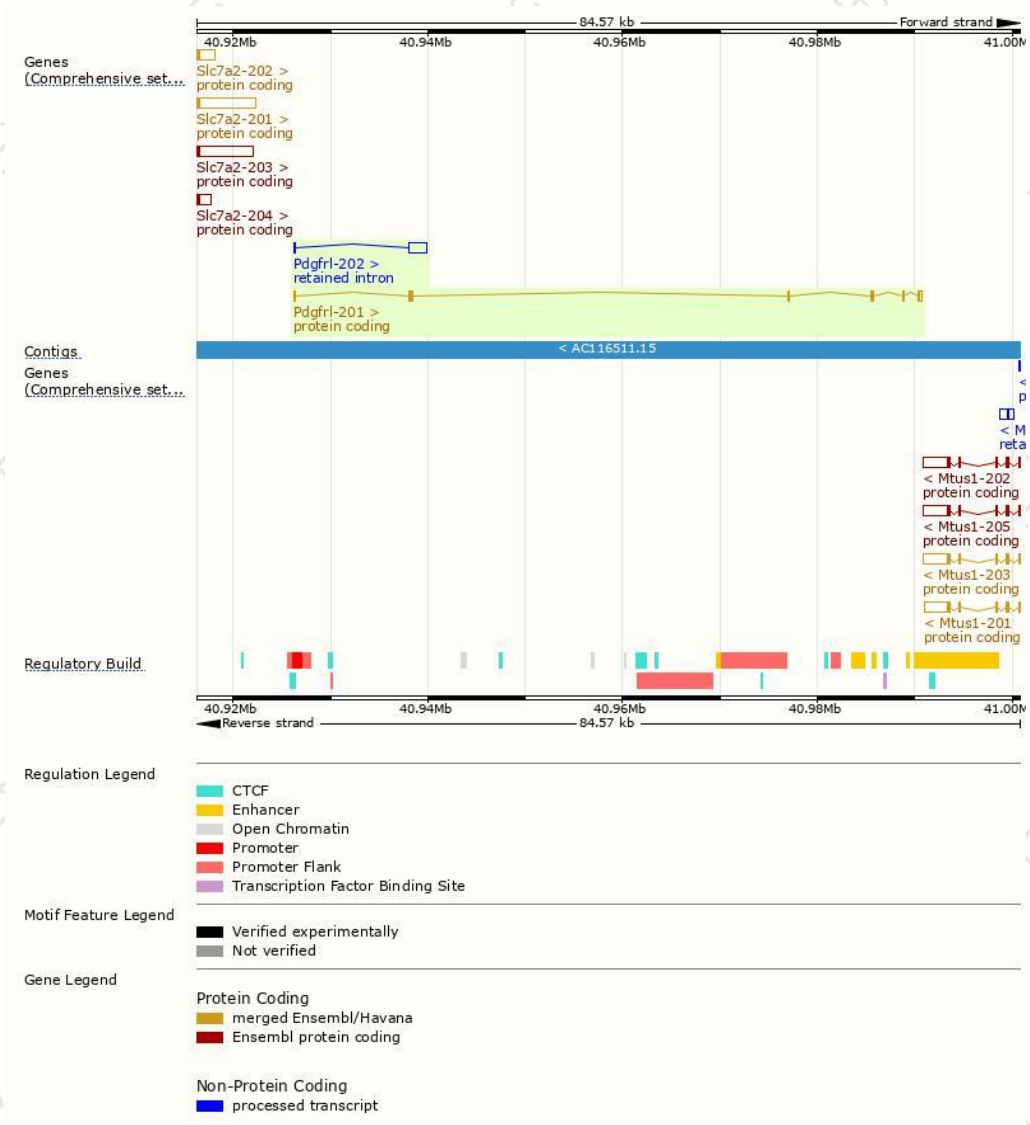
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Pdgfrl-201	ENSMUST00000034004.9	1548	375aa	Protein coding	CCDS22259	A0A0R4J0C9	TSL:1 GENCODE basic APPRIS P1
Pdgfrl-202	ENSMUST00000143216.1	2069	No protein	Retained intron	-	-	TSL:1

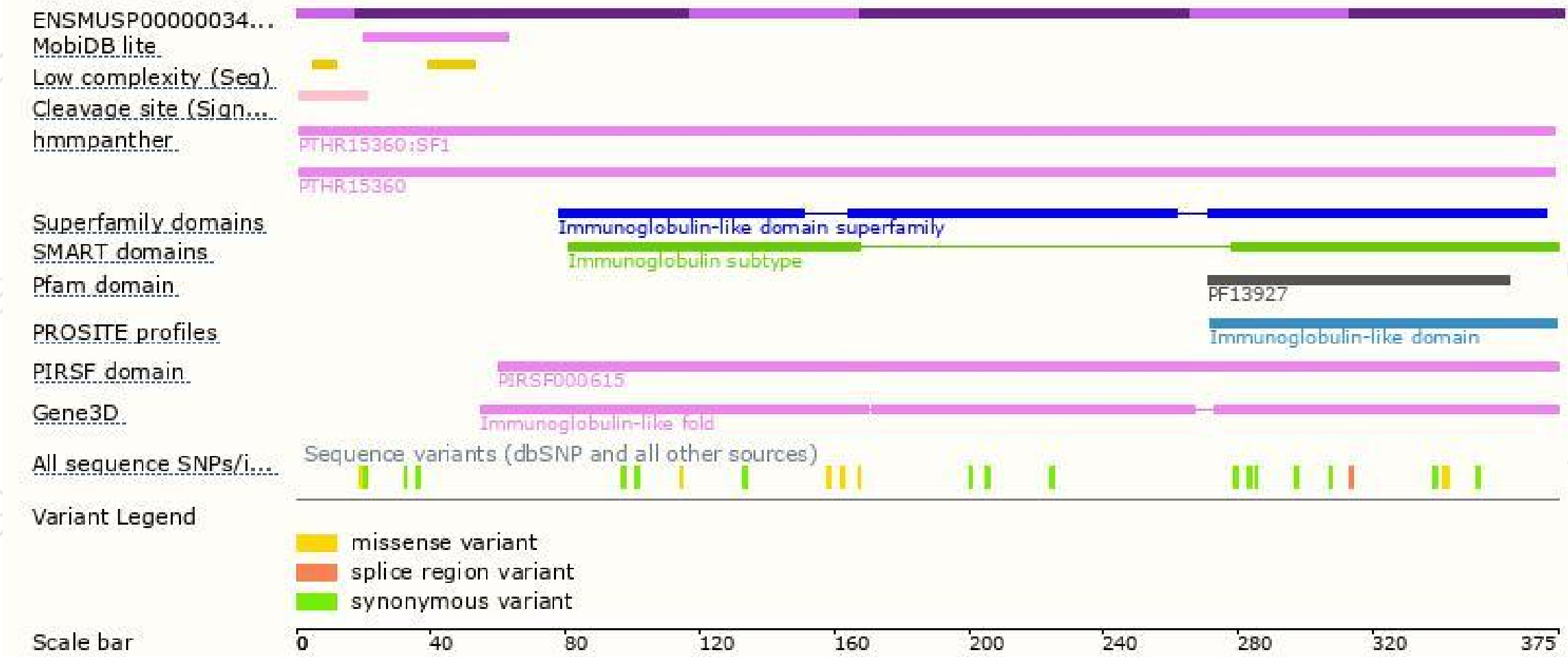
The strategy is based on the design of *Pdgfrl-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

