

Ppp1r36 Cas9-KO Strategy

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Design Date: 2021-2-2

Project Overview

Project Name

Ppp1r36

Project type

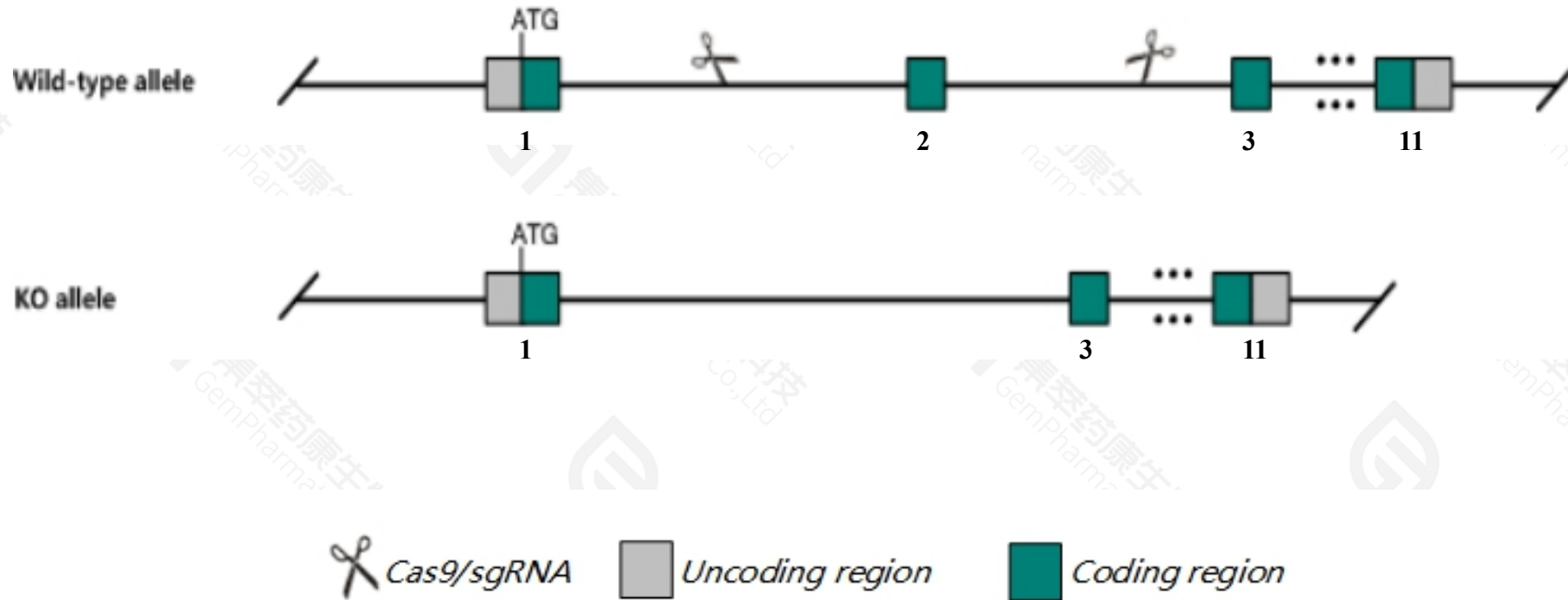
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Ppp1r36* gene. The schematic diagram is as follows:



- The *Ppp1r36* gene has 4 transcripts. According to the structure of *Ppp1r36* gene, exon2 of *Ppp1r36-201*(ENSMUST00000063977.8) transcript is recommended as the knockout region. The region contains 65bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Ppp1r36* gene. The brief process is as follows: sgRNA was transcribed in vitro. Cas9 and sgRNA were microinjected into the fertilized eggs of C57BL/6JGpt mice. Fertilized eggs were transplanted to obtain positive F0 mice which were confirmed by PCR and sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6JGpt mice.

- The *Ppp1r36* 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.

Ppp1r36 protein phosphatase 1, regulatory subunit 36 [Mus musculus (house mouse)]

Gene ID: 210762, updated on 13-Mar-2020

Summary



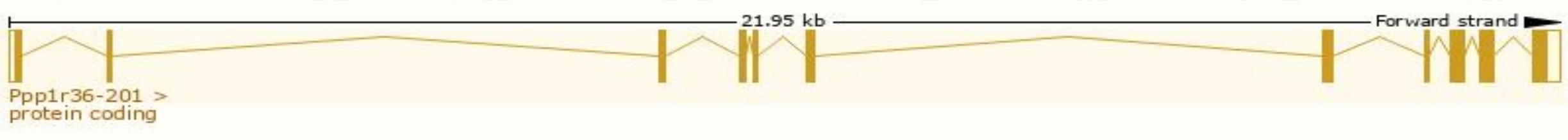
Official Symbol	Ppp1r36 provided by MGI
Official Full Name	protein phosphatase 1, regulatory subunit 36 provided by MGI
Primary source	MGI:MGI:2684916
See related	Ensembl:ENSMUSG00000052221
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Gm70
Expression	Biased expression in testis adult (RPKM 18.2), bladder adult (RPKM 2.4) and 1 other tissue See more
Orthologs	human all

Transcript information (Ensembl)

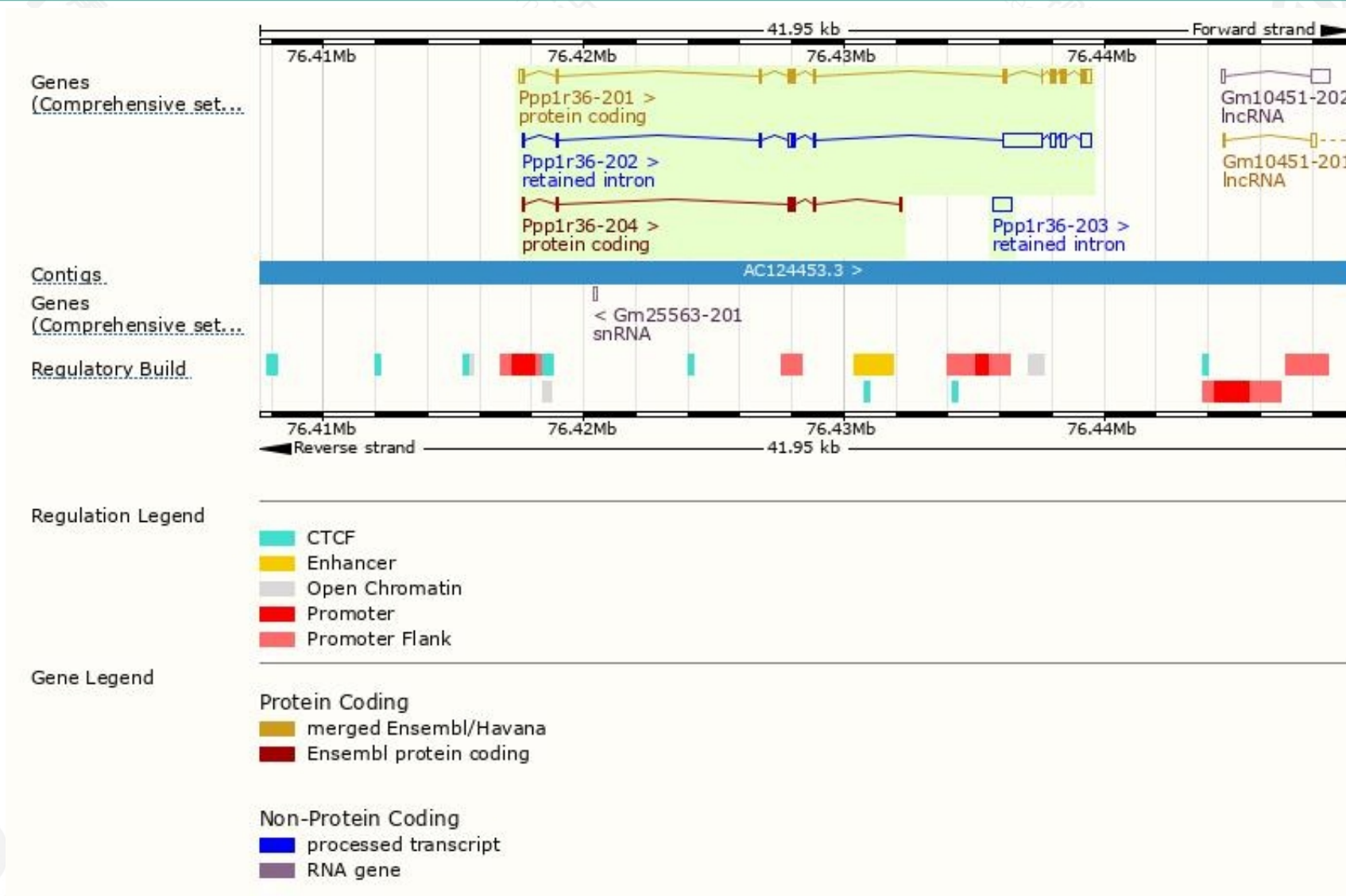
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Ppp1r36-201	ENSMUST00000063977.8	1515	411aa	Protein coding	CCDS49093	D3Z0R2	TSL:5 GENCODE basic APPRIS P1
Ppp1r36-204	ENSMUST00000220187.1	504	150aa	Protein coding	-	A0A1W2P8A7	TSL:3 GENCODE basic
Ppp1r36-202	ENSMUST00000218732.1	2738	No protein	Retained intron	-	-	TSL:1
Ppp1r36-203	ENSMUST00000219251.1	768	No protein	Retained intron	-	-	TSL:NA

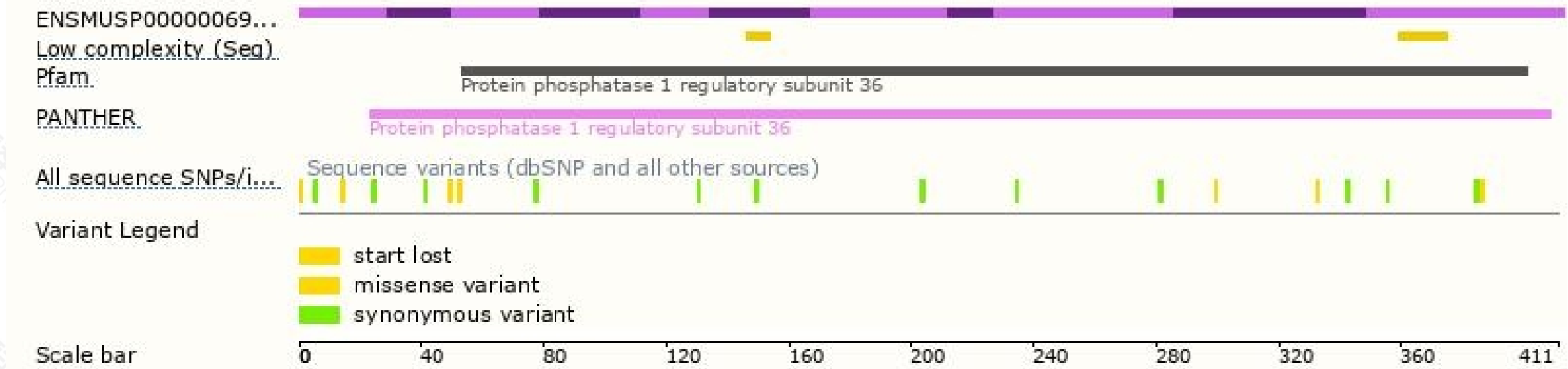
The strategy is based on the design of *Ppp1r36-201* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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

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