

Ppp6r3 Cas9-KO Strategy

Designer: Rui Xiong

Reviewer: Longyun Hu

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Project Overview

Project Name

Ppp6r3

Project type

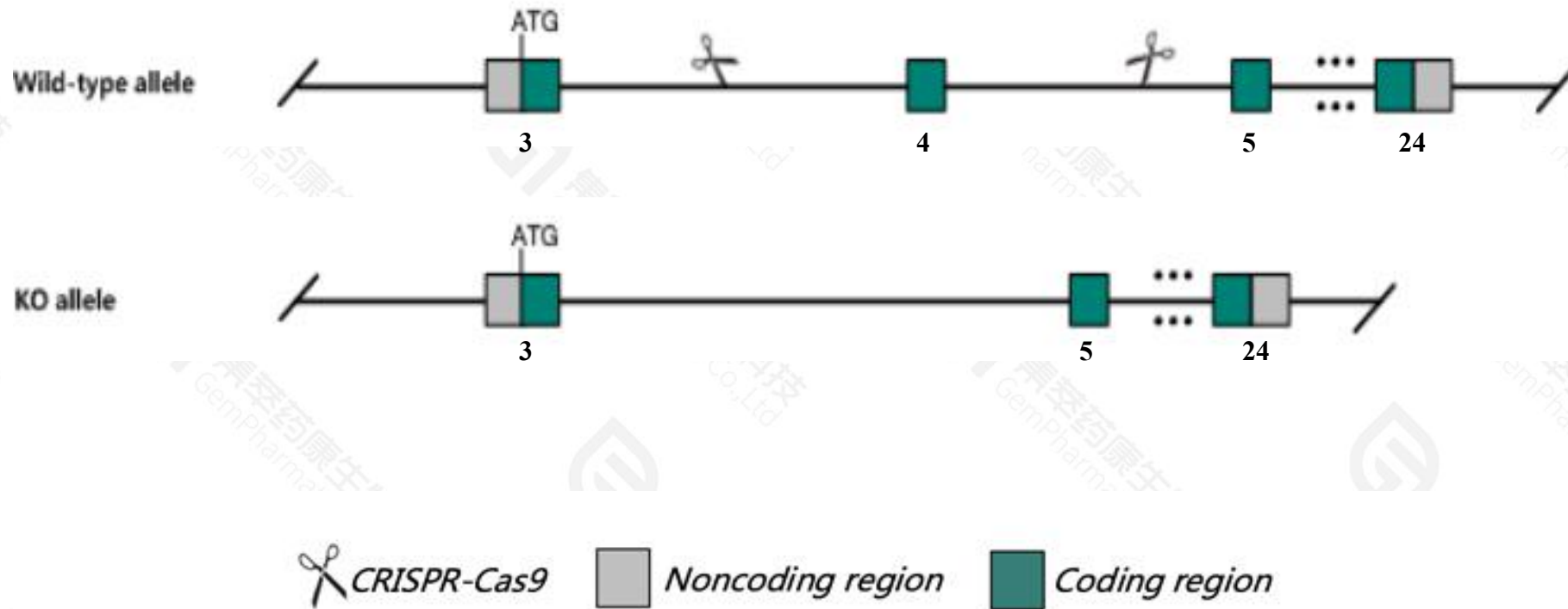
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR-Cas9 technology to edit the *Ppp6r3* gene. The schematic diagram is as follows:



- The *Ppp6r3* gene has 10 transcripts. According to the structure of *Ppp6r3* gene, exon4 of *Ppp6r3*-202(ENSMUST00000113997.9) transcript is recommended as the knockout region. The region contains 187bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR-Cas9 technology to modify *Ppp6r3* gene. The brief process is as follows: CRISPR-Cas9 system 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.

- Transcript *Ppp6r3-207*、*Ppp6r3-208*、*Ppp6r3-210* may not be affected.
- The *Ppp6r3* gene is located on the Chr19. 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.

Ppp6r3 protein phosphatase 6, regulatory subunit 3 [Mus musculus (house mouse)]

Gene ID: 52036, updated on 17-Dec-2020

Summary



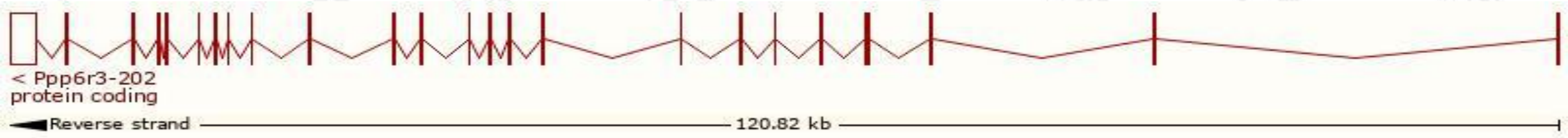
Official Symbol	Ppp6r3 provided by MGI
Official Full Name	protein phosphatase 6, regulatory subunit 3 provided by MGI
Primary source	MGI:MGI:1921807
See related	Ensembl:ENSMUSG00000024908
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	4930528G08Rik, 9130026N02Rik, D19Bwg1430e, D19Ertd703, D19Ertd703e, Pp, Pp6r3, Ppcs3, Ppt, Pptcs3, S, Sap1, Saps3, mKIAA1558
Expression	Ubiquitous expression in CNS E11.5 (RPKM 26.1), thymus adult (RPKM 20.9) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

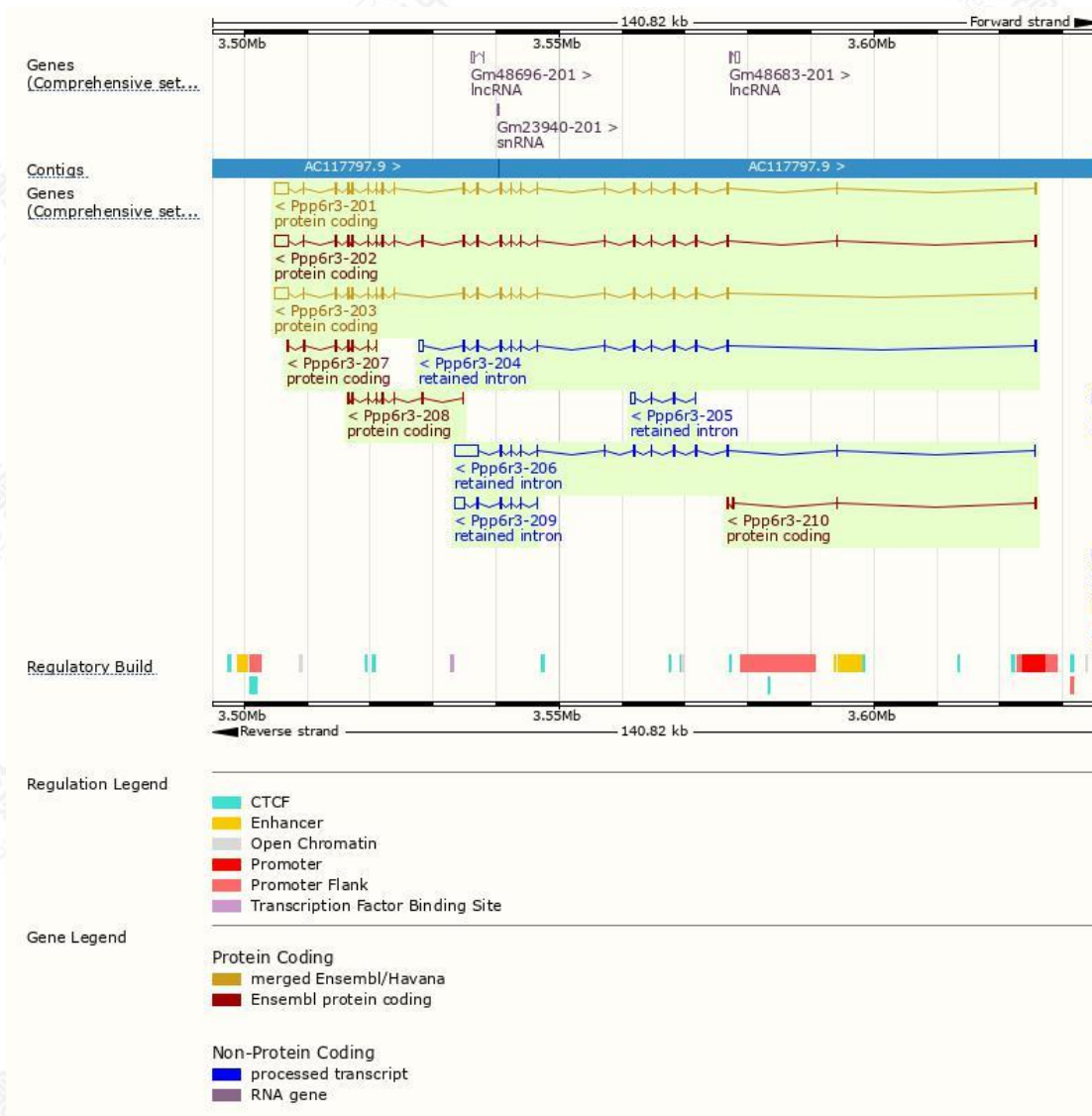
The gene has 10 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Ppp6r3-202	ENSMUST00000113997.9	4952	873aa	Protein coding	CCDS50341		TSL:5 , GENCODE basic , APPRIS ALT1 ,
Ppp6r3-201	ENSMUST00000025846.16	4841	844aa	Protein coding	CCDS29397		TSL:1 , GENCODE basic , APPRIS P3 ,
Ppp6r3-203	ENSMUST00000172362.3	4633	827aa	Protein coding	CCDS50340		TSL:1 , GENCODE basic ,
Ppp6r3-207	ENSMUST00000225475.2	1025	252aa	Protein coding	-		CDS 5' incomplete ,
Ppp6r3-208	ENSMUST00000225624.2	684	228aa	Protein coding	-		CDS 5' and 3' incomplete ,
Ppp6r3-210	ENSMUST00000226109.2	509	56aa	Protein coding	-		CDS 3' incomplete ,
Ppp6r3-206	ENSMUST00000225446.2	5112	No protein	Retained intron	-		
Ppp6r3-204	ENSMUST00000223919.2	2237	No protein	Retained intron	-		
Ppp6r3-209	ENSMUST00000225705.2	1882	No protein	Retained intron	-		
Ppp6r3-205	ENSMUST00000225339.2	765	No protein	Retained intron	-		

The strategy is based on the design of *Ppp6r3-202* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



If you have any questions, you are welcome to inquire.
Tel: 400-9660890

