

Ppp4r2 Cas9-KO Strategy

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Project Overview

Project Name

Ppp4r2

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Ppp4r2* gene. The schematic diagram is as follows:



- The *Ppp4r2* gene has 5 transcripts. According to the structure of *Ppp4r2* gene, exon4 of *Ppp4r2-201* (ENSMUST00000063854.6) transcript is recommended as the knockout region. The region contains 94bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Ppp4r2* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Ppp4r2* 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)

Ppp4r2 protein phosphatase 4, regulatory subunit 2 [Mus musculus (house mouse)]

Gene ID: 232314, updated on 31-Jan-2019

Summary



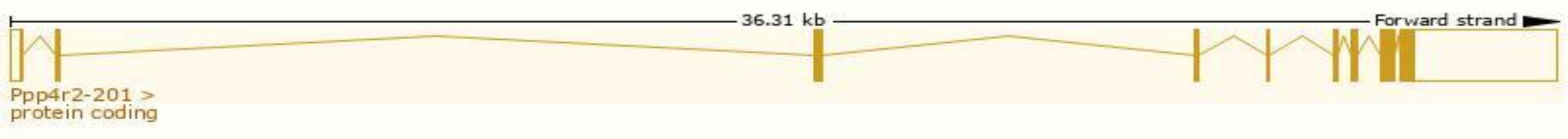
Official Symbol	Ppp4r2 provided by MGI
Official Full Name	protein phosphatase 4, regulatory subunit 2 provided by MGI
Primary source	MGI:MGI:3027896
See related	Ensembl:ENSMUSG00000052144
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	BE691708, C230060M08Rik
Expression	Broad expression in CNS E11.5 (RPKM 16.8), CNS E14 (RPKM 12.1) and 24 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Ppp4r2-201	ENSMUST00000063854.6	4874	417aa	Protein coding	CCDS20391	A0A0R4J0U2	TSL:1 GENCODE basic APPRIS P1
Ppp4r2-203	ENSMUST00000203580.1	1948	300aa	Protein coding	-	A0A0N4SVH3	CDS 5' incomplete TSL:5
Ppp4r2-204	ENSMUST00000203940.2	685	229aa	Protein coding	-	A0A0N4SV05	5' and 3' truncations in transcript evidence prevent annotation of the start and the end of the CDS. CDS 5' and 3' incomplete TSL:3
Ppp4r2-205	ENSMUST00000204001.1	2560	No protein	Retained intron	-	-	TSL:5
Ppp4r2-202	ENSMUST00000203067.1	598	No protein	Retained intron	-	-	TSL:NA

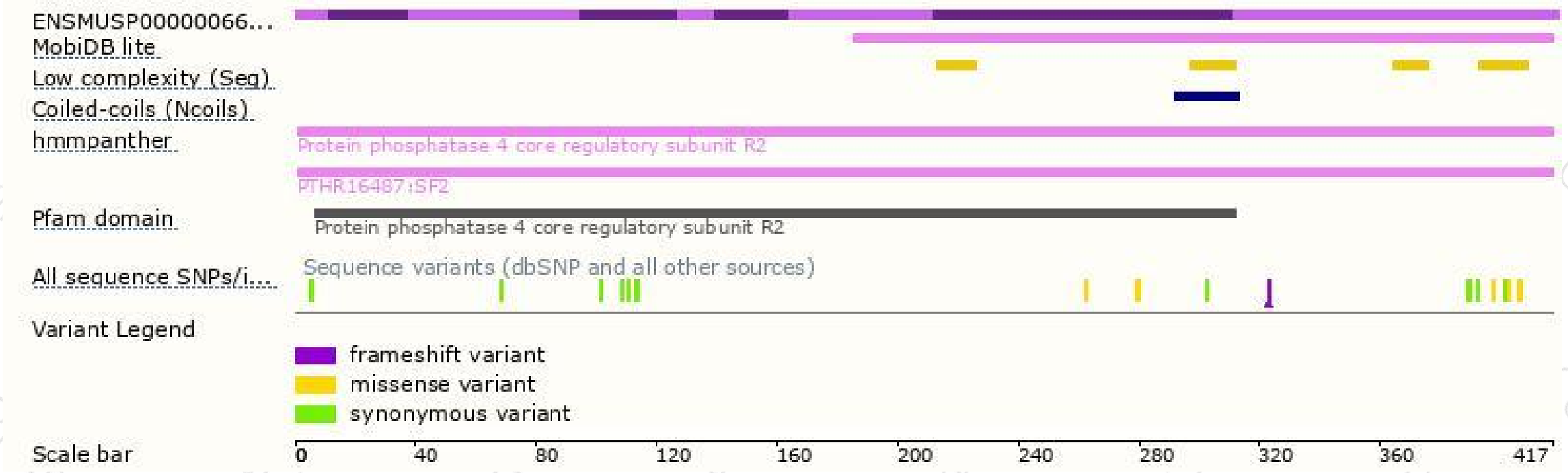
The strategy is based on the design of *Ppp4r2-201* transcript,The transcription is shown below



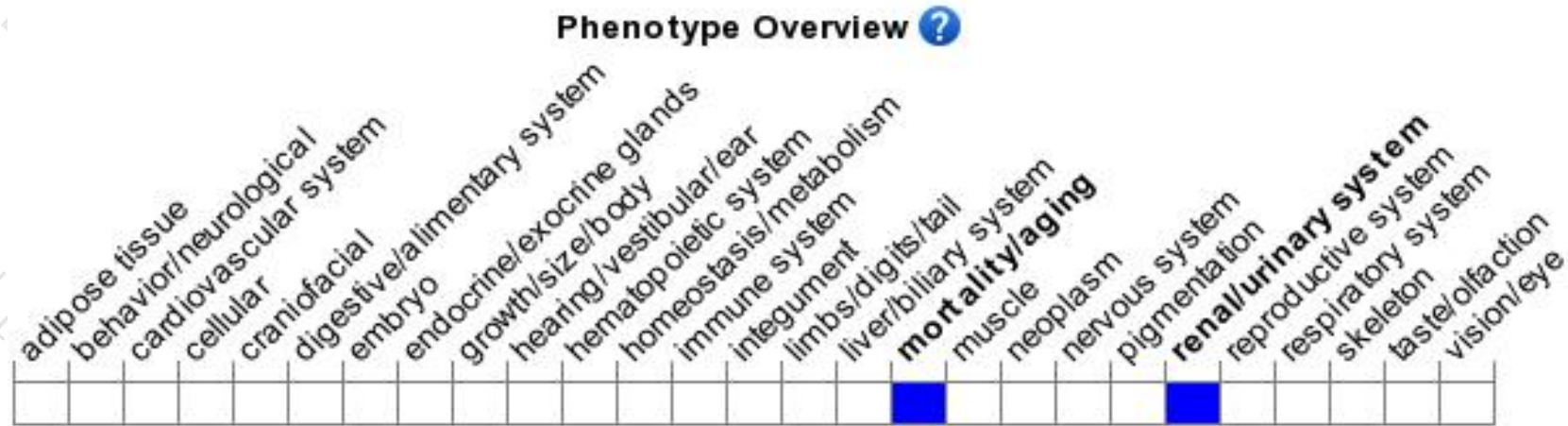
Genomic location distribution



Protein domain



Mouse phenotype description(MGI)



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

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

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