

Csrnp3 Cas9-KO Strategy

Designer:

JiaYu

Reviewer:

Xiaojing Li

Design Date:

2020-2-27

Project Overview

Project Name

Csrnp3

Project type

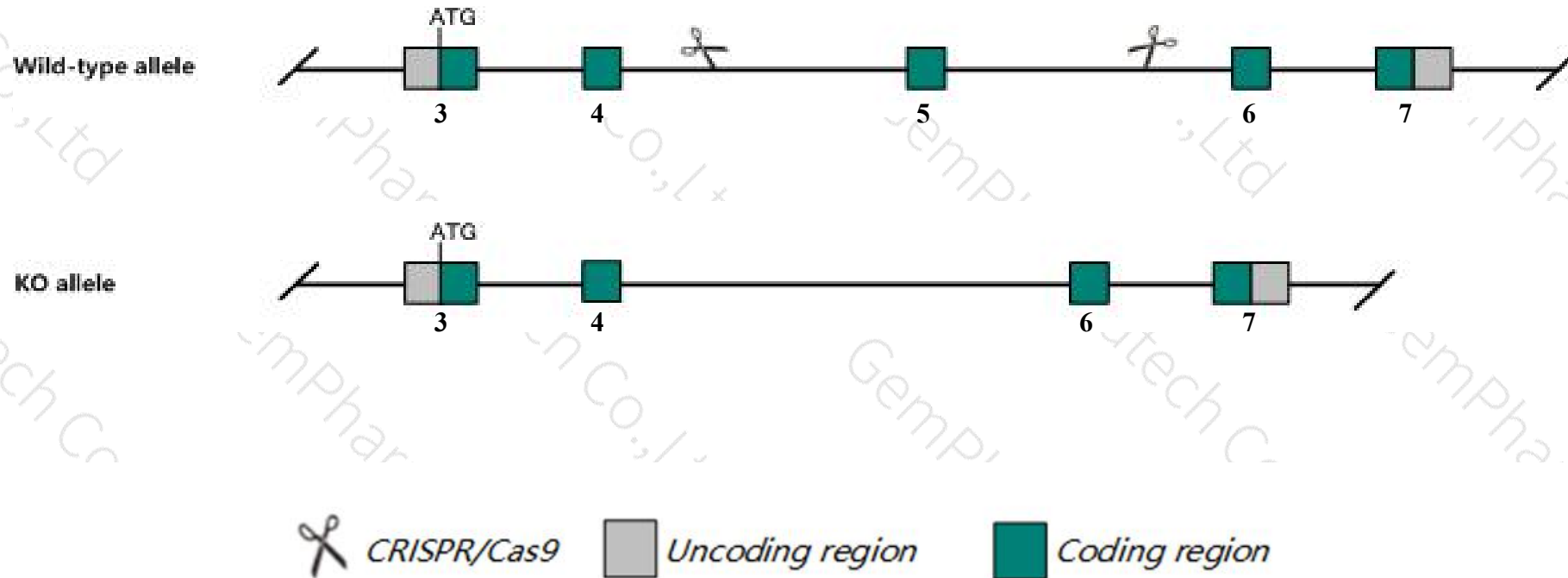
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Csrnp3* gene. The schematic diagram is as follows:



- The *Csrnp3* gene has 8 transcripts. According to the structure of *Csrnp3* gene, exon5 of *Csrnp3-204* (ENSMUST00000122912.7) transcript is recommended as the knockout region. The region contains 260bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Csrnp3* gene. The brief process is as follows: CRISPR/Cas9 system

- According to the existing MGI data, Mice homozygous for a knock-out allele exhibit normal development, hematopoiesis and T cell function.
- The *Csrnp3* gene is located on the Chr2. 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)

Csrnp3 cysteine-serine-rich nuclear protein 3 [Mus musculus (house mouse)]

Gene ID: 77771, updated on 31-Jan-2019

Summary



Official Symbol	Csrnp3 provided by MGI
Official Full Name	cysteine-serine-rich nuclear protein 3 provided by MGI
Primary source	MGI:MGI:1925021
See related	Ensembl:ENSMUSG00000044647
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	A330102K23Rik, CSRNP-3, Csrnp3, Mbu1, taip-2
Expression	Biased expression in CNS E18 (RPKM 9.1), whole brain E14.5 (RPKM 8.2) and 7 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

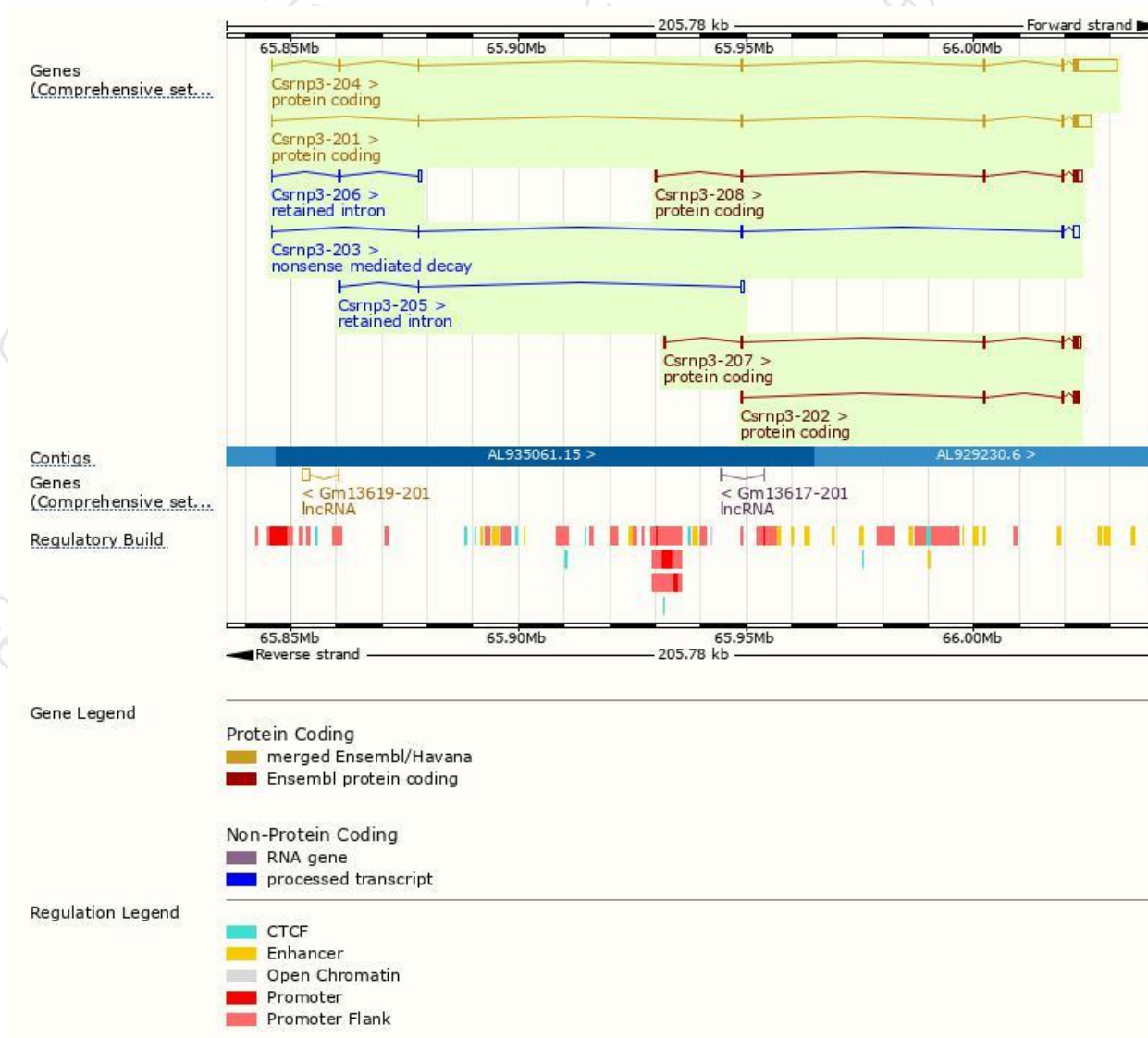
The gene has 8 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Csrnp3-204	ENSMUST00000122912.7	10672	597aa	Protein coding	CCDS16074	P59055	TSL:1 GENCODE basic APPRIS P3
Csrnp3-201	ENSMUST00000053910.9	4495	597aa	Protein coding	CCDS16074	P59055	TSL:1 GENCODE basic APPRIS P3
Csrnp3-208	ENSMUST00000176109.7	2958	585aa	Protein coding	CCDS71060	P59055	TSL:5 GENCODE basic APPRIS ALT2
Csrnp3-207	ENSMUST00000145598.8	2566	585aa	Protein coding	CCDS71060	P59055	TSL:1 GENCODE basic APPRIS ALT2
Csrnp3-202	ENSMUST00000112394.1	1821	585aa	Protein coding	CCDS71060	P59055	TSL:1 GENCODE basic APPRIS ALT2
Csrnp3-203	ENSMUST00000112397.2	1895	63aa	Nonsense mediated decay	-	H3BJW4	TSL:1
Csrnp3-206	ENSMUST00000139896.1	1056	No protein	Retained intron	-	-	TSL:1
Csrnp3-205	ENSMUST00000129133.1	665	No protein	Retained intron	-	-	TSL:3

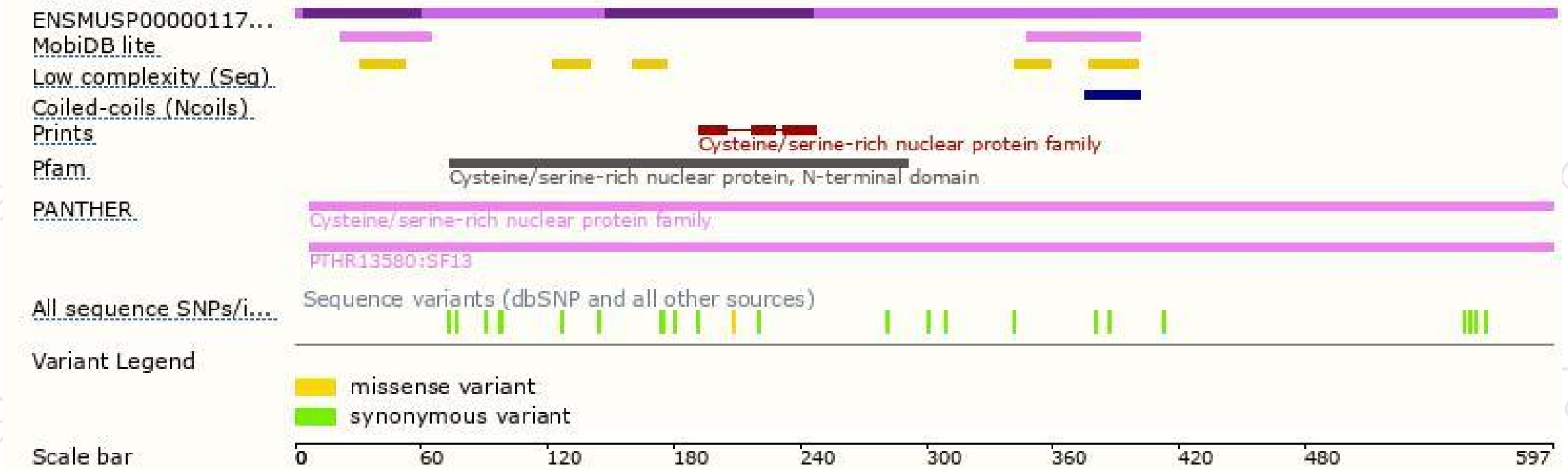
The strategy is based on the design of *Csrnp3-204* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

