

Synpo2l Cas9-KO Strategy

Designer:

Ruirui Zhang

Reviewer:

Huimin Su

Design Date:

2019-9-21

Project Overview

Project Name

Synpo2l

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Synpo2l* gene. The schematic diagram is as follows:



- The *Synpo2l* gene has 3 transcripts. According to the structure of *Synpo2l* gene, exon2-exon3 of *Synpo2l-201* (ENSMUST00000057090.11) transcript is recommended as the knockout region. The region contains 667bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Synpo2l* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Synpo2l* gene is located on the Chr14. 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)

Synpo2l synaptopodin 2-like [*Mus musculus* (house mouse)]

Gene ID: 68760, updated on 12-Aug-2019

Summary



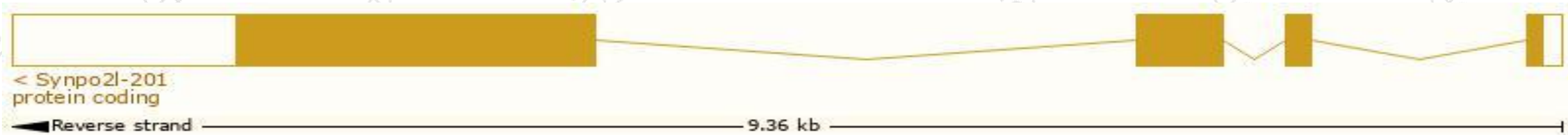
Official Symbol	Synpo2l provided by MGI
Official Full Name	synaptopodin 2-like provided by MGI
Primary source	MGI:MGI:1916010
See related	Ensembl:ENSMUSG00000039376
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Chap; 1110054M18Rik
Expression	Biased expression in heart adult (RPKM 17.2), limb E14.5 (RPKM 6.4) and 3 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

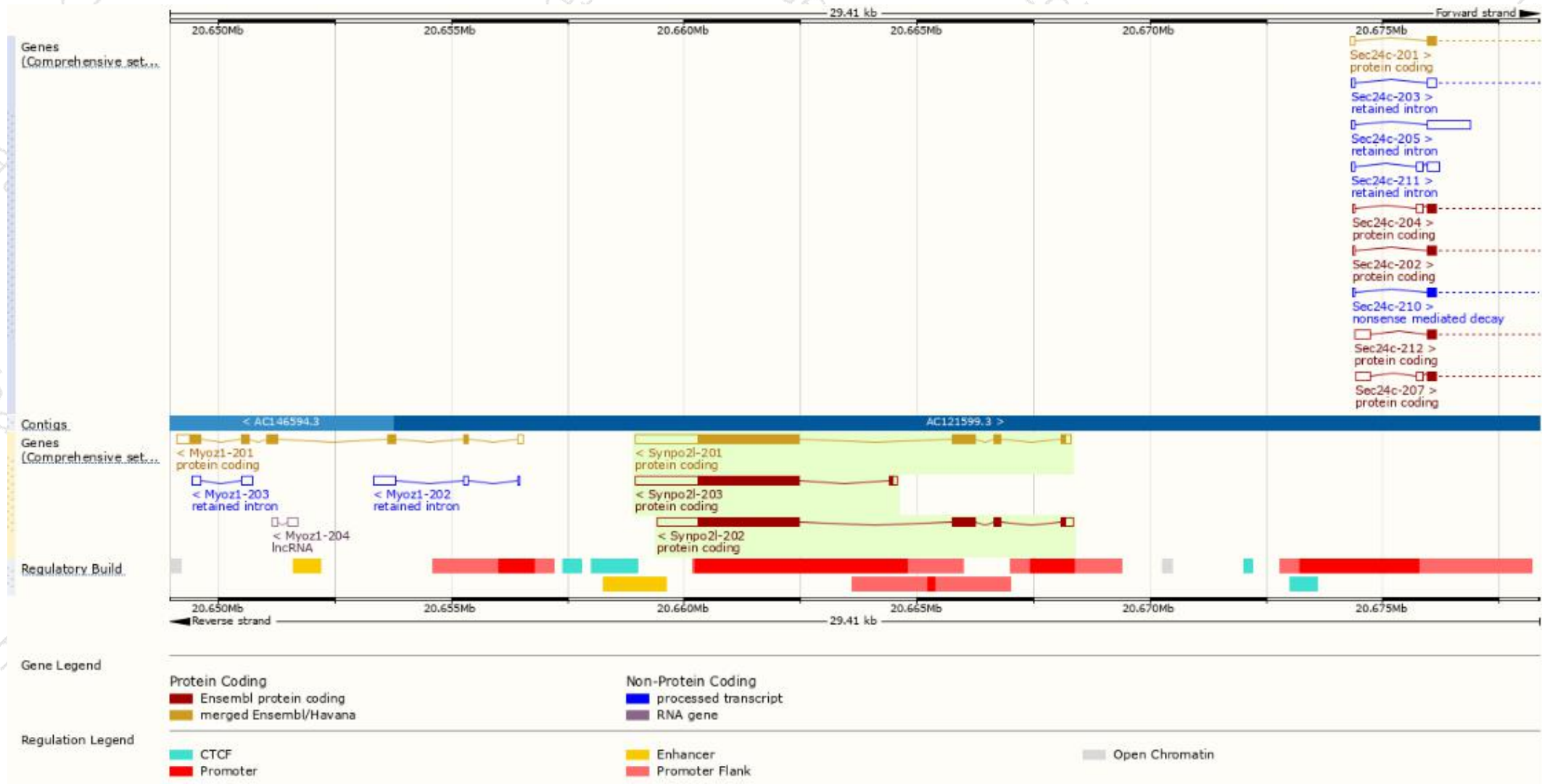
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Synpo2l-201	ENSMUST00000057090.11	4394	975aa	Protein coding	CCDS26849	Q8BWB1	TSL:1 GENCODE basic
Synpo2l-202	ENSMUST00000117386.1	3979	978aa	Protein coding	CCDS79269	B2RQK7	TSL:1 GENCODE basic APPRIS P1
Synpo2l-203	ENSMUST00000119483.1	3696	749aa	Protein coding	CCDS79268	D3YU08	TSL:1 GENCODE basic

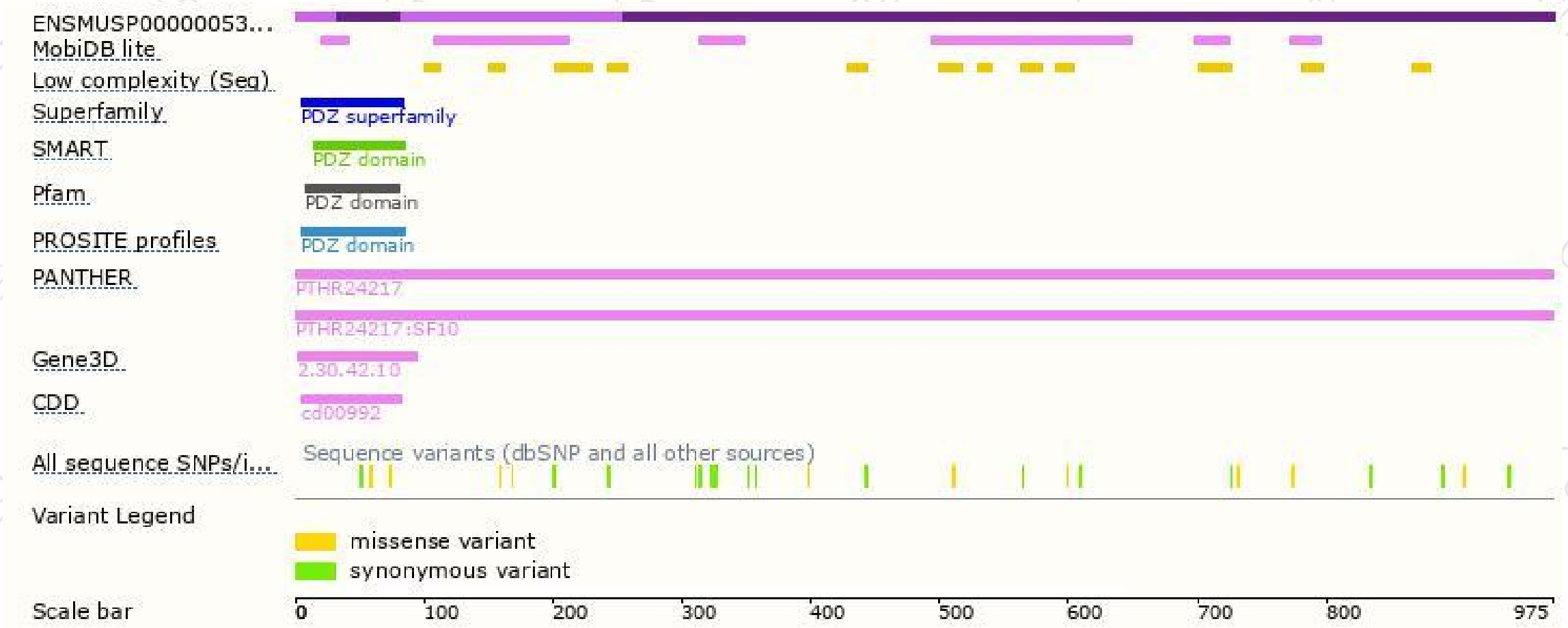
The strategy is based on the design of *Synpo2l-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

