

***Raver2* Cas9-KO Strategy**

Designer:

JiaYu

Reviewer:

Xiaojing Li

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Project Overview

Project Name

Raver2

Project type

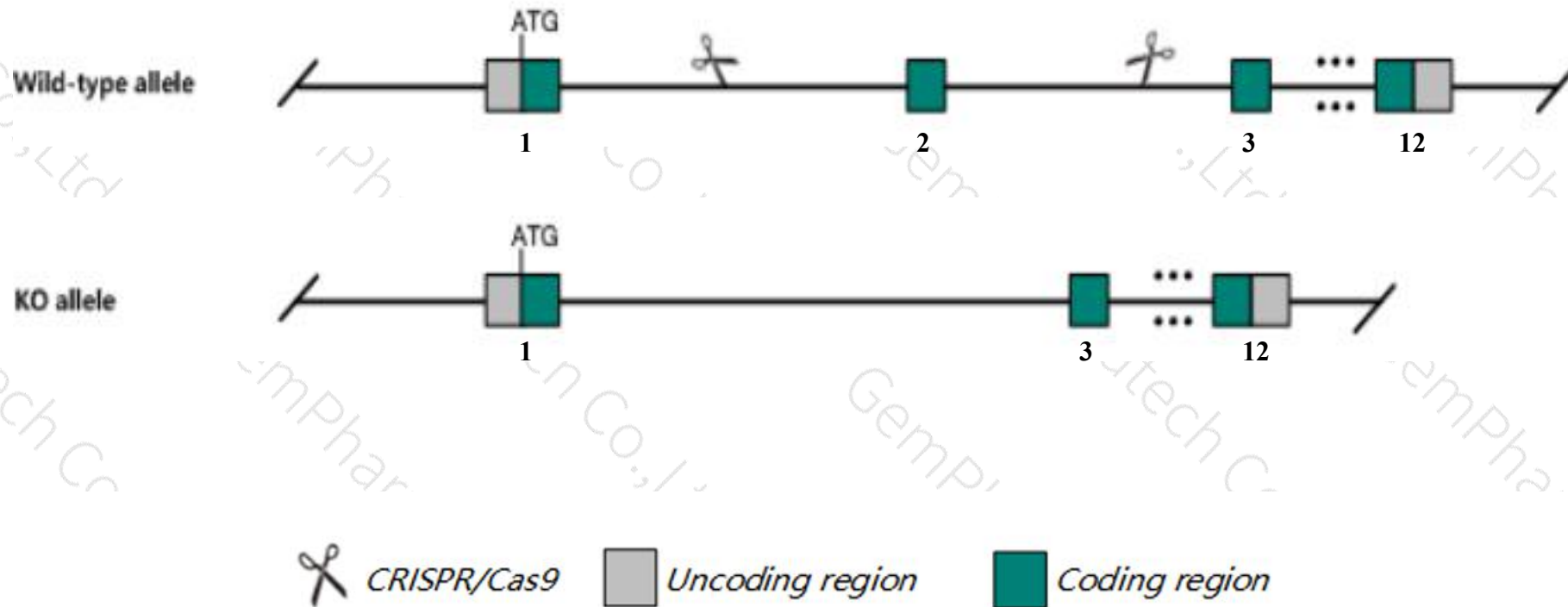
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Raver2* gene. The schematic diagram is as follows:



- The *Raver2* gene has 3 transcripts. According to the structure of *Raver2* gene, exon2 of *Raver2-201* (ENSMUST00000038463.14) transcript is recommended as the knockout region. The region contains 67bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Raver2* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Raver2* gene is located on the Chr4. 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)

Raver2 ribonucleoprotein, PTB-binding 2 [Mus musculus (house mouse)]

Gene ID: 242570, updated on 31-Jan-2019

Summary



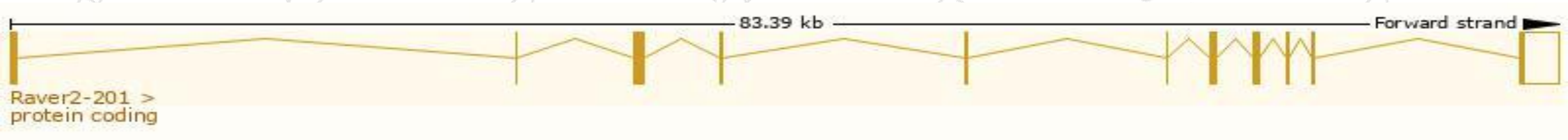
Official Symbol	Raver2 provided by MGI
Official Full Name	ribonucleoprotein, PTB-binding 2 provided by MGI
Primary source	MGI:MGI:2443623
See related	Ensembl:ENSMUSG00000035275
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	A430091O22Rik
Expression	Broad expression in lung adult (RPKM 9.6), limb E14.5 (RPKM 8.9) and 22 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

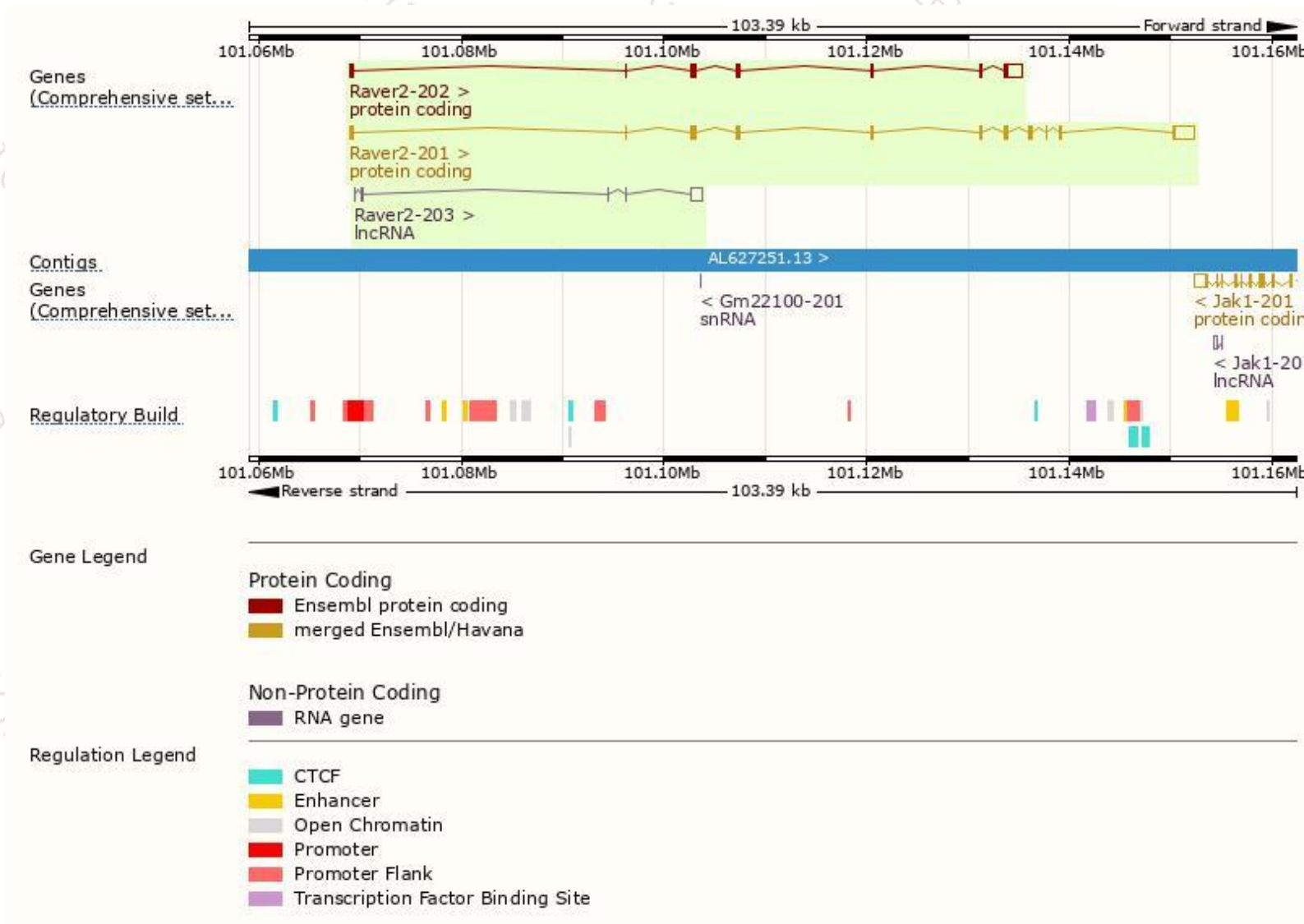
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Raver2-201	ENSMUST00000038463.14	4045	673aa	Protein coding	CCDS18392	Q7TPD6	TSL:1 GENCODE basic APPRIS P2
Raver2-202	ENSMUST00000106955.1	2893	459aa	Protein coding	-	B1ASP0	TSL:1 GENCODE basic APPRIS ALT2
Raver2-203	ENSMUST00000148148.1	1444	No protein	lncRNA	-	-	TSL:1

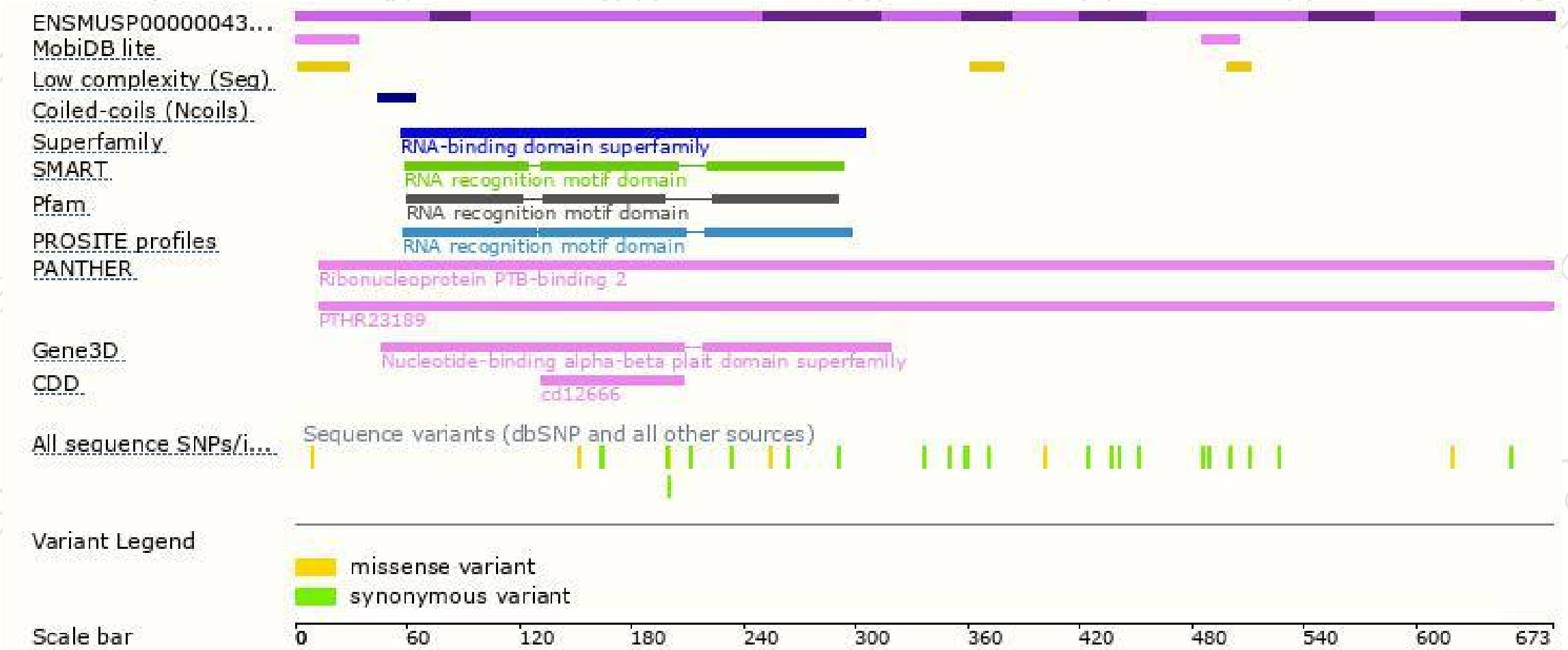
The strategy is based on the design of *Raver2-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

