

Rnf187 Cas9-KO Strategy

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Project Overview

Project Name

Rnf187

Project type

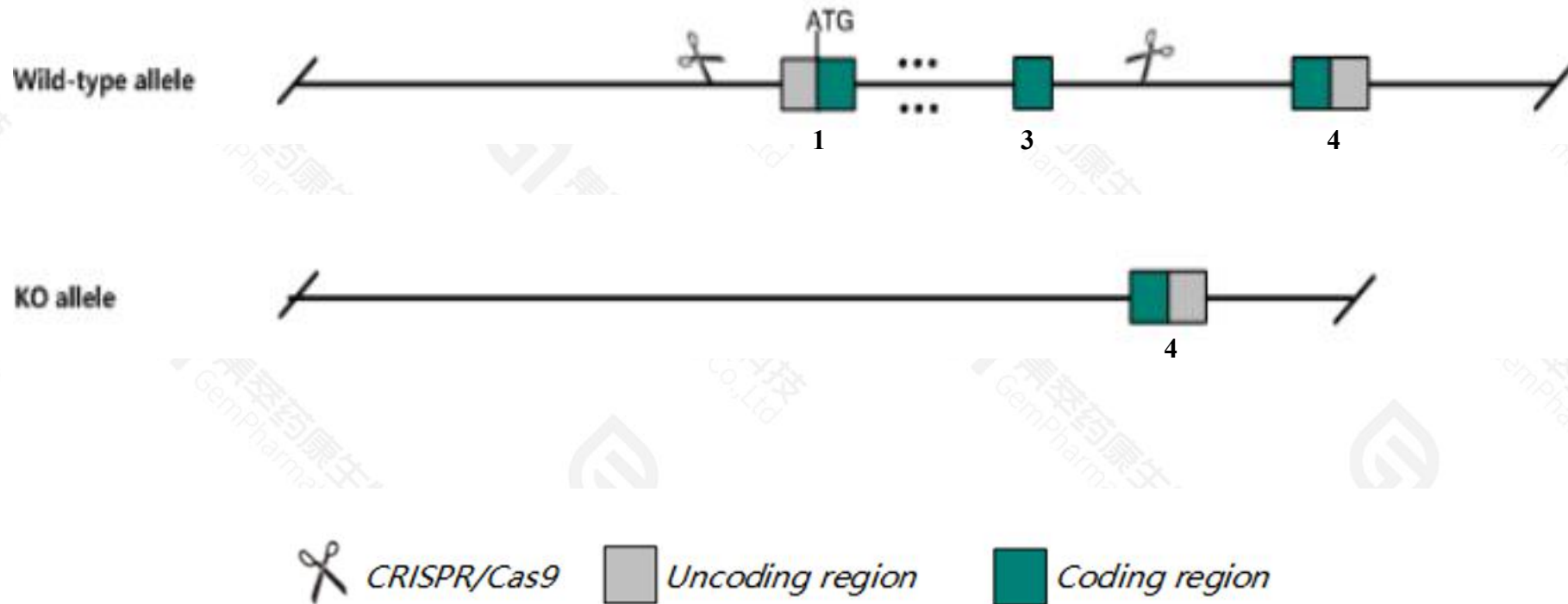
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Rnf187* gene. The schematic diagram is as follows:



- The *Rnfl87* gene has 2 transcripts. According to the structure of *Rnfl87* gene, exon1-exon3 of *Rnfl87*-201(ENSMUST00000094151.5) transcript is recommended as the knockout region. The region contains start codon ATG. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Rnfl87* 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.

- The *Rnfl87* gene is located on the Chr11. 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)

Rnf187 ring finger protein 187 [*Mus musculus* (house mouse)]

Gene ID: 108660, updated on 17-Nov-2020

[Download Datasets](#)

Summary



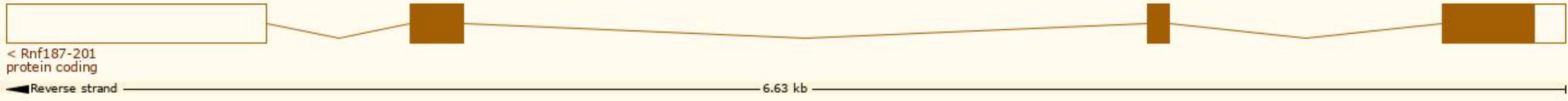
Official Symbol	Rnf187 provided by MGI
Official Full Name	ring finger protein 187 provided by MGI
Primary source	MGI:MGI:1914224
See related	Ensembl:ENSMUSG00000020496
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	RACO-1; AB030190; 2410016F01Rik
Expression	Ubiquitous expression in adrenal adult (RPKM 227.2), whole brain E14.5 (RPKM 200.3) and 28 other tissues See more
Orthologs	human all
NEW	Try the new Gene table
	Try the new Transcript table

Transcript information (Ensembl)

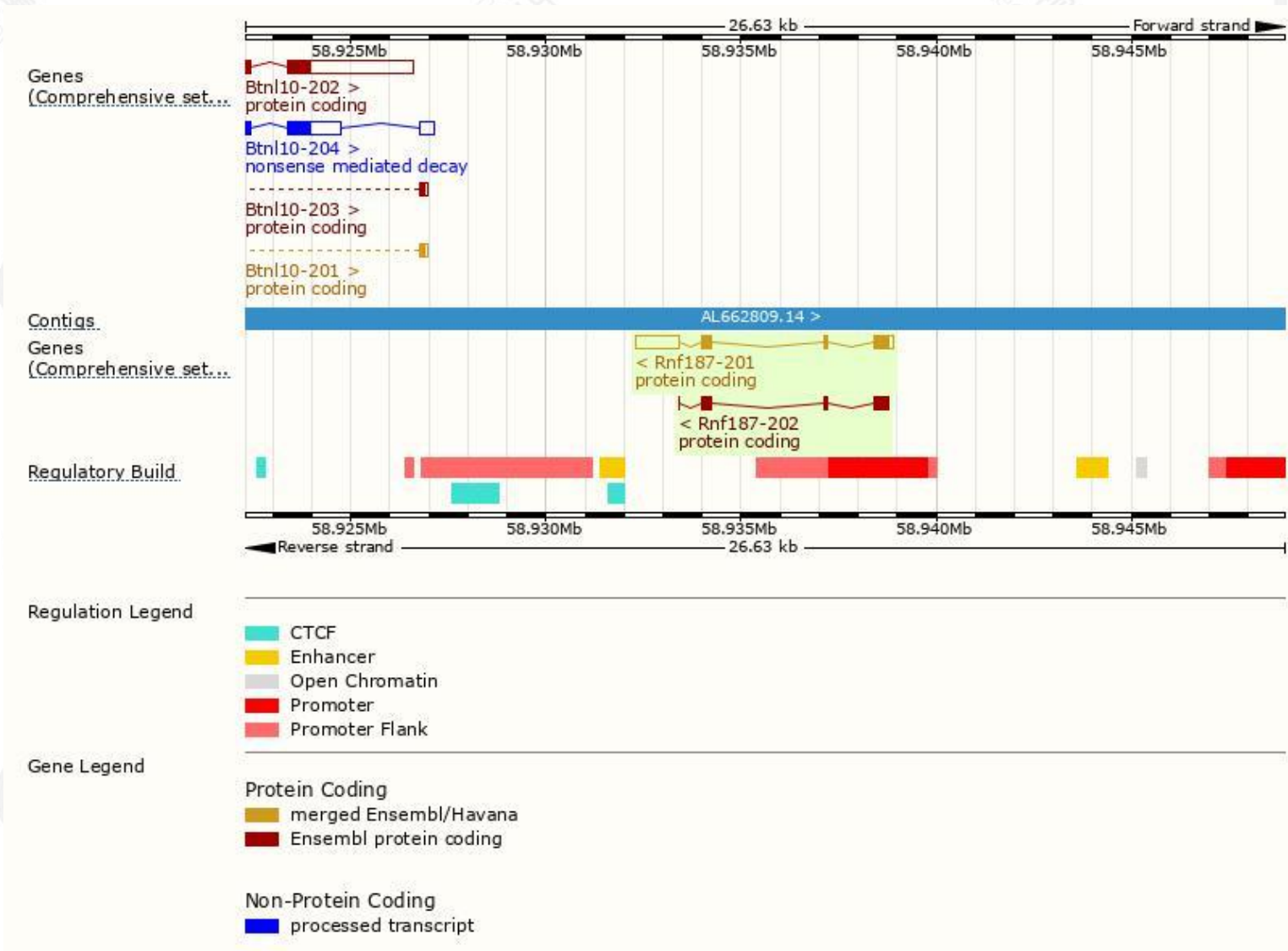
The gene has 1 transcript, all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt Match	Flags
Rnf187-201	ENSMUST00000094151.6	1949	236aa	Protein coding	CCDS78953	A0A0J9YQM4	TSL:1 Gencode basic APPRIS P1

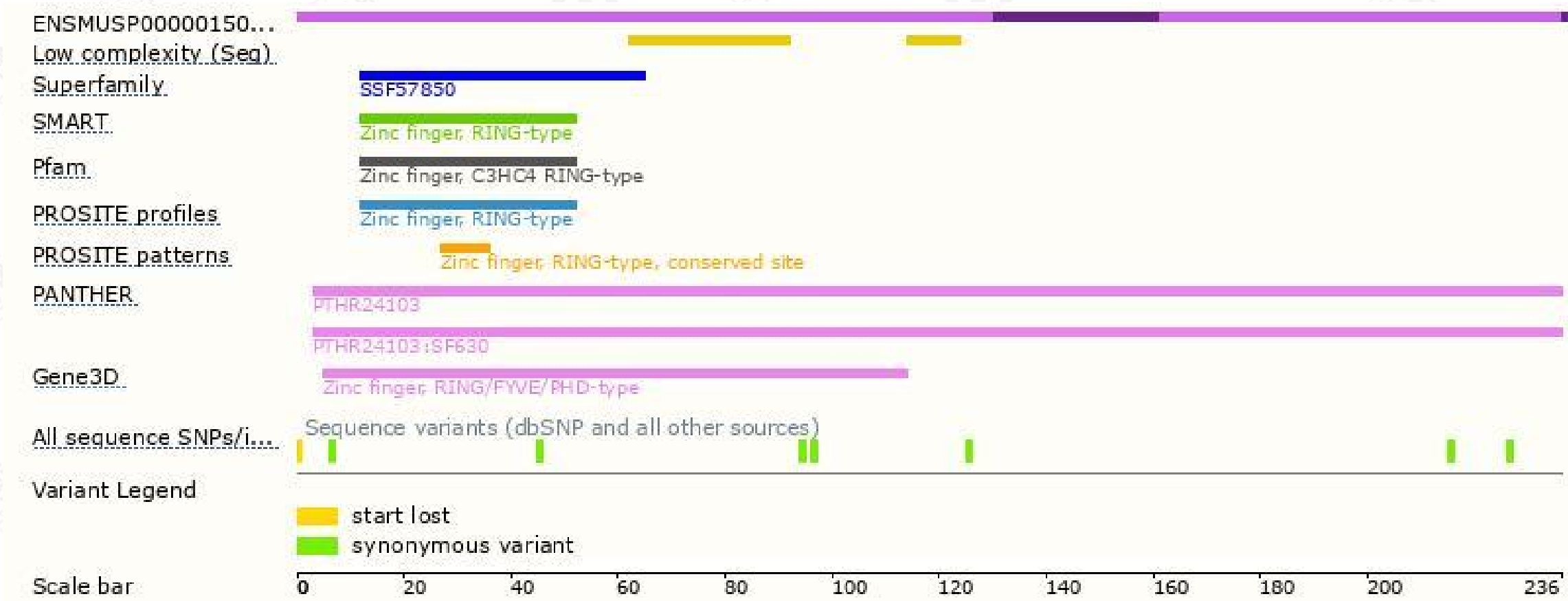
The strategy is based on the design of *Rnf187-201* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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