

Zfp292 Cas9-KO Strategy

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Project Overview

Project Name

Zfp292

Project type

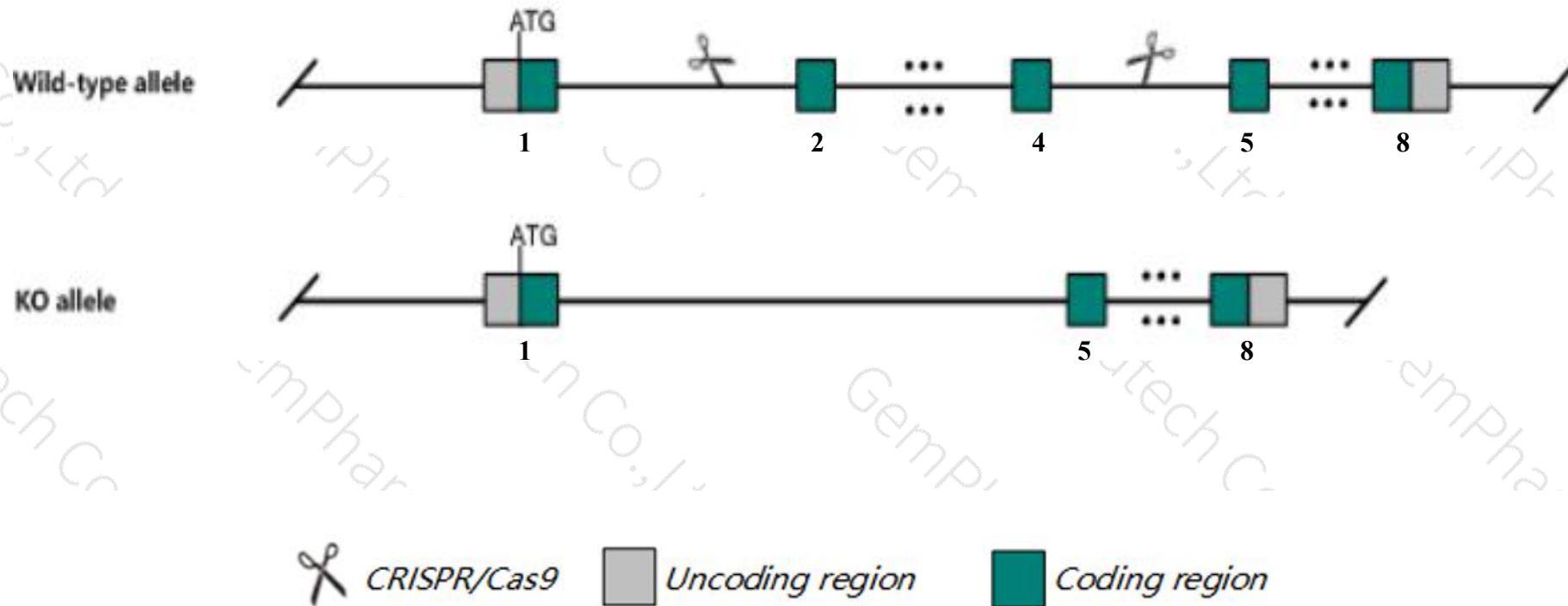
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zfp292* gene. The schematic diagram is as follows:



- The *Zfp292* gene has 2 transcripts. According to the structure of *Zfp292* gene, exon2-exon4 of *Zfp292-201* (ENSMUST00000047950.5) transcript is recommended as the knockout region. The region contains 370bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Zfp292* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Zfp292* 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)

Zfp292 zinc finger protein 292 [*Mus musculus* (house mouse)]

Gene ID: 30046, updated on 13-Mar-2020

Summary

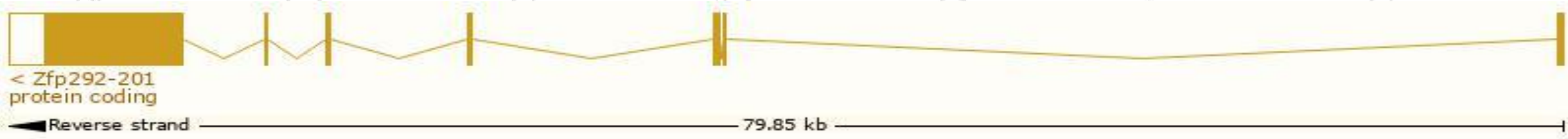
Official Symbol	Zfp292 provided by MGI
Official Full Name	zinc finger protein 292 provided by MGI
Primary source	MGI:MGI:1353423
See related	Ensembl:ENSMUSG00000039967
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Zfp15; Zn-15; Zn-16; Zfp-15; Krox-10; AI449016; mKIAA0530; 5730450D02Rik; 5830493J20Rik; 9430062L07Rik
Expression	Broad expression in CNS E11.5 (RPKM 6.0), CNS E14 (RPKM 5.7) and 24 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

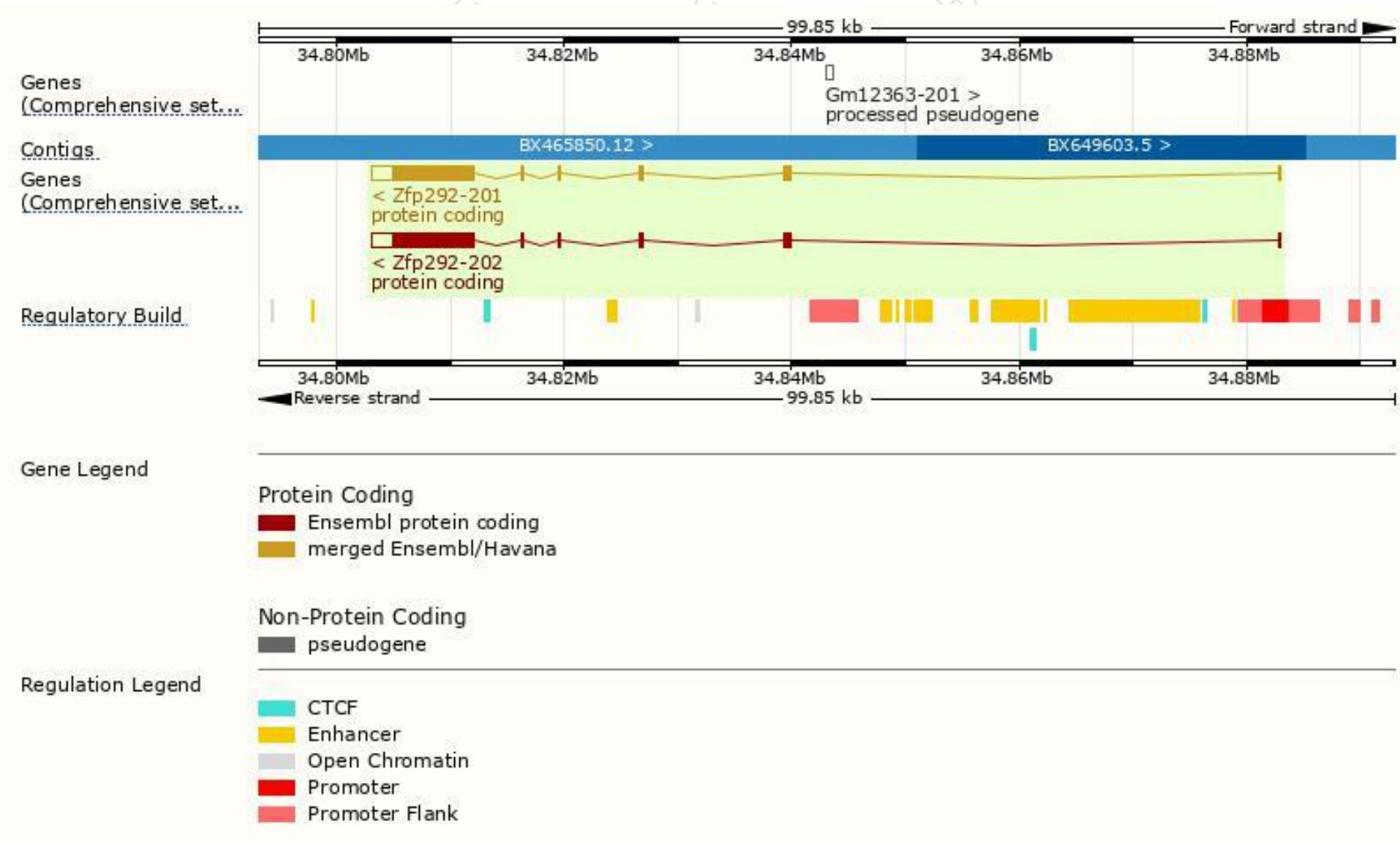
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zfp292-201	ENSMUST00000047950.5	9986	2698aa	Protein coding	CCDS51138	Q9Z2U2	TSL:1 GENCODE basic APPRIS P2
Zfp292-202	ENSMUST00000098163.8	9941	2693aa	Protein coding	-	Q9Z2U2	TSL:1 GENCODE basic APPRIS ALT2

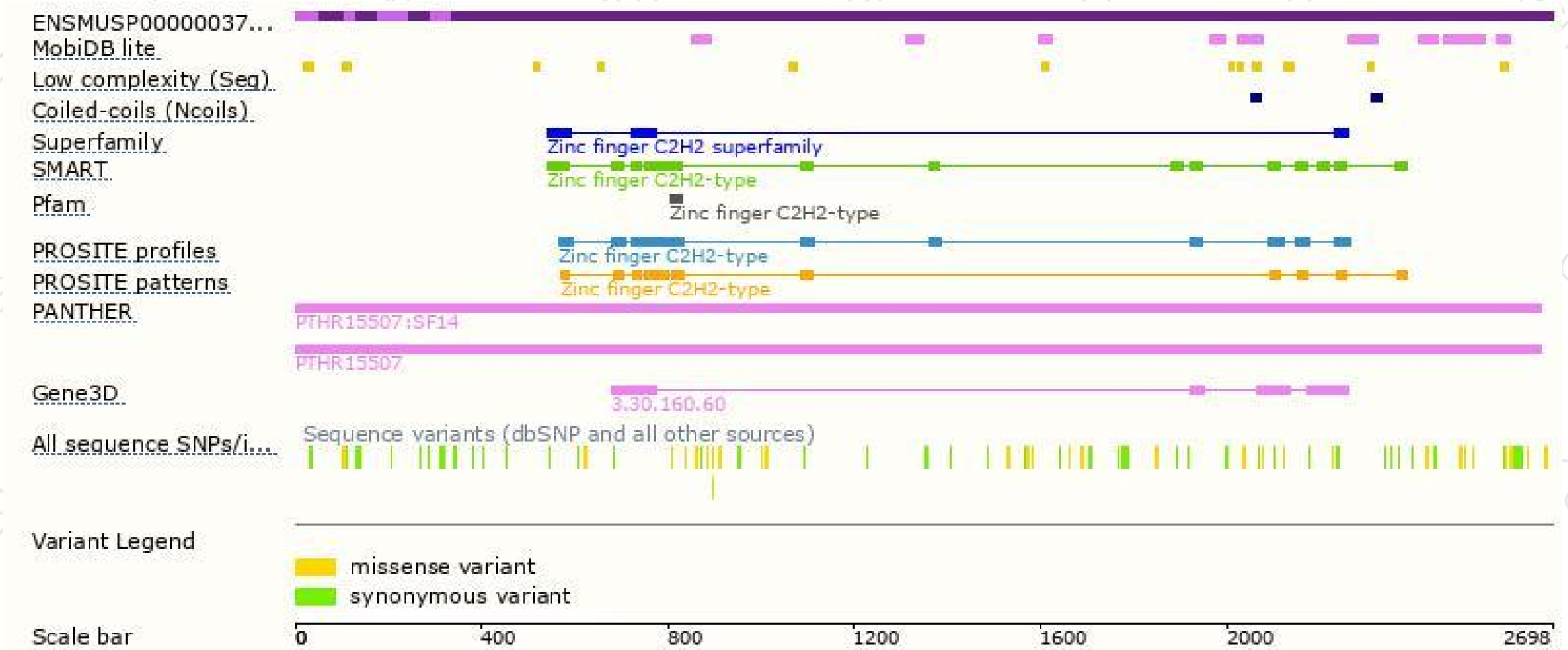
The strategy is based on the design of *Zfp292-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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