

Zfp112 Cas9-KO Strategy

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Reviewer

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Project Overview

Project Name

Zfp112

Project type

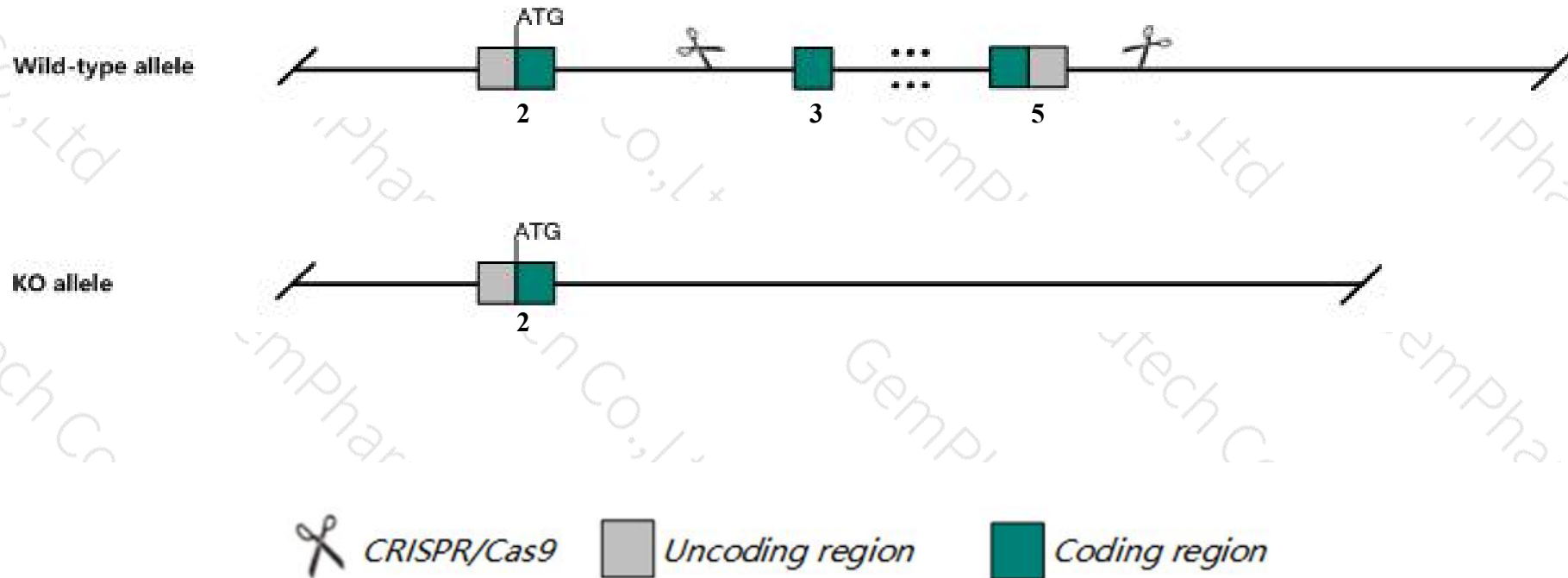
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zfp112* gene. The schematic diagram is as follows:



- The *Zfp112* gene has 4 transcripts. According to the structure of *Zfp112* gene, exon3-exon5 of *Zfp112-201* (ENSMUST00000005413.3) transcript is recommended as the knockout region. The region contains most of the coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Zfp112* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Zfp112* gene is located on the Chr7. 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.

Zfp112 zinc finger protein 112 [*Mus musculus* (house mouse)]

Gene ID: 57745, updated on 14-Aug-2019

Summary

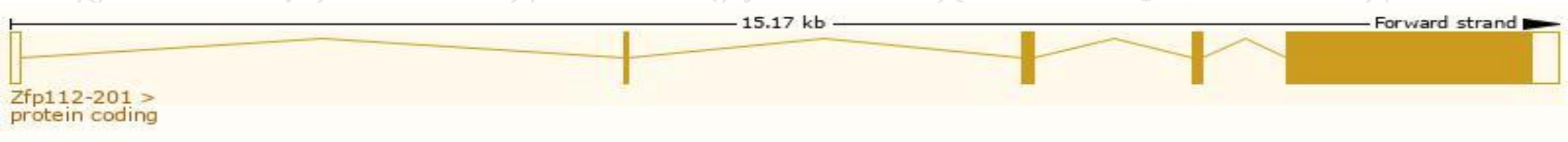
Official Symbol	Zfp112 provided by MGI
Official Full Name	zinc finger protein 112 provided by MGI
Primary source	MGI:MGI:1929115
See related	Ensembl:ENSMUSG00000052675
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Znf112; Znf228
Expression	Broad expression in cortex adult (RPKM 1.6), frontal lobe adult (RPKM 1.4) and 26 other tissues See more
Orthologs	human all

Transcript information Ensembl

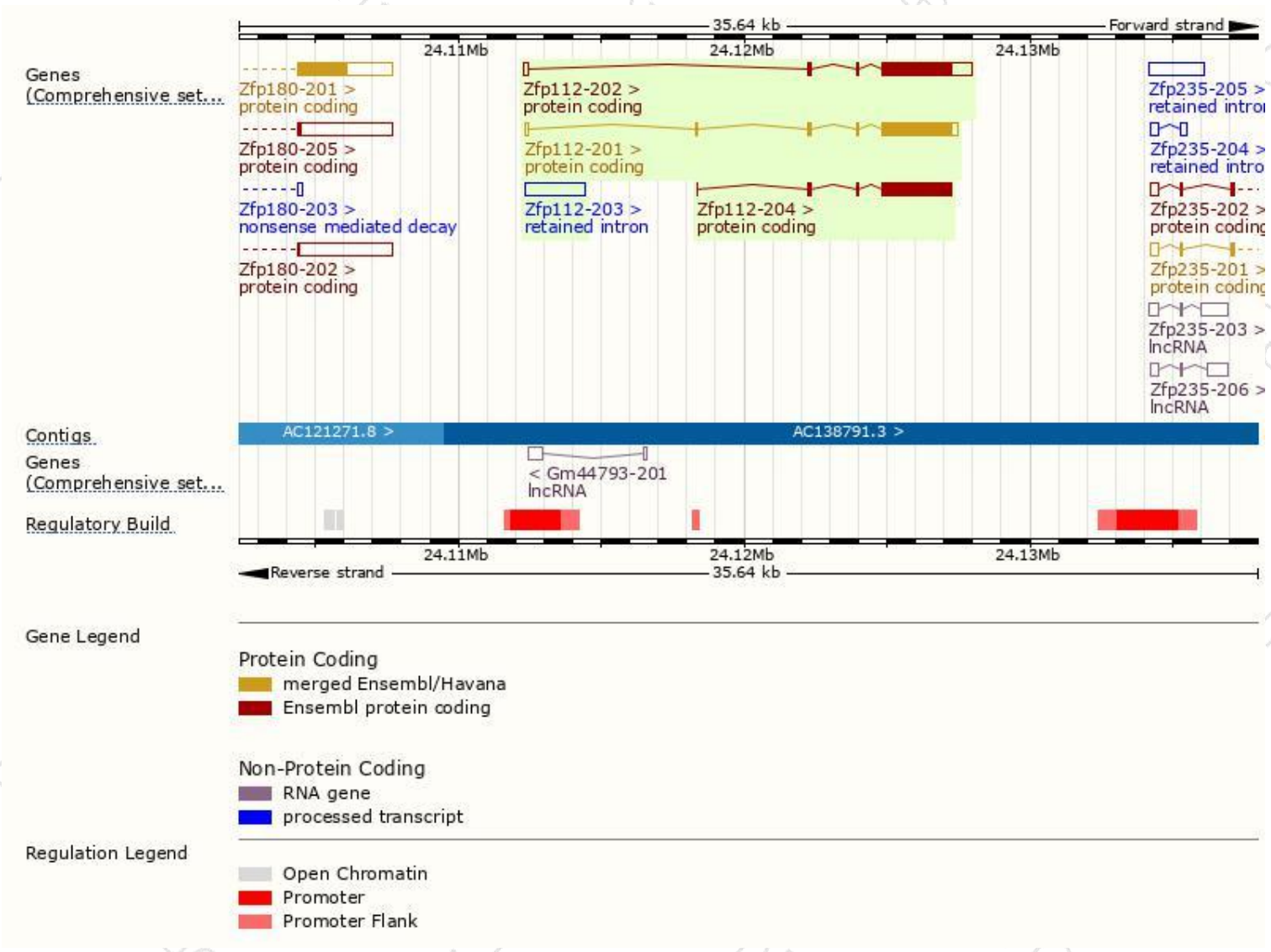
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zfp112-201	ENSMUST00000005413.3	3044	879aa	Protein coding	CCDS39824	Q0VAW7	TSL:1 GENCODE basic APPRIS P2
Zfp112-202	ENSMUST00000120006.7	3464	873aa	Protein coding	-	Q0VAW7	TSL:1 GENCODE basic APPRIS ALT2
Zfp112-204	ENSMUST00000215113.1	2628	875aa	Protein coding	-	A0A1L1SUE1	TSL:5 GENCODE basic APPRIS ALT2
Zfp112-203	ENSMUST00000206878.1	2107	No protein	Retained intron	-	-	TSL:NA

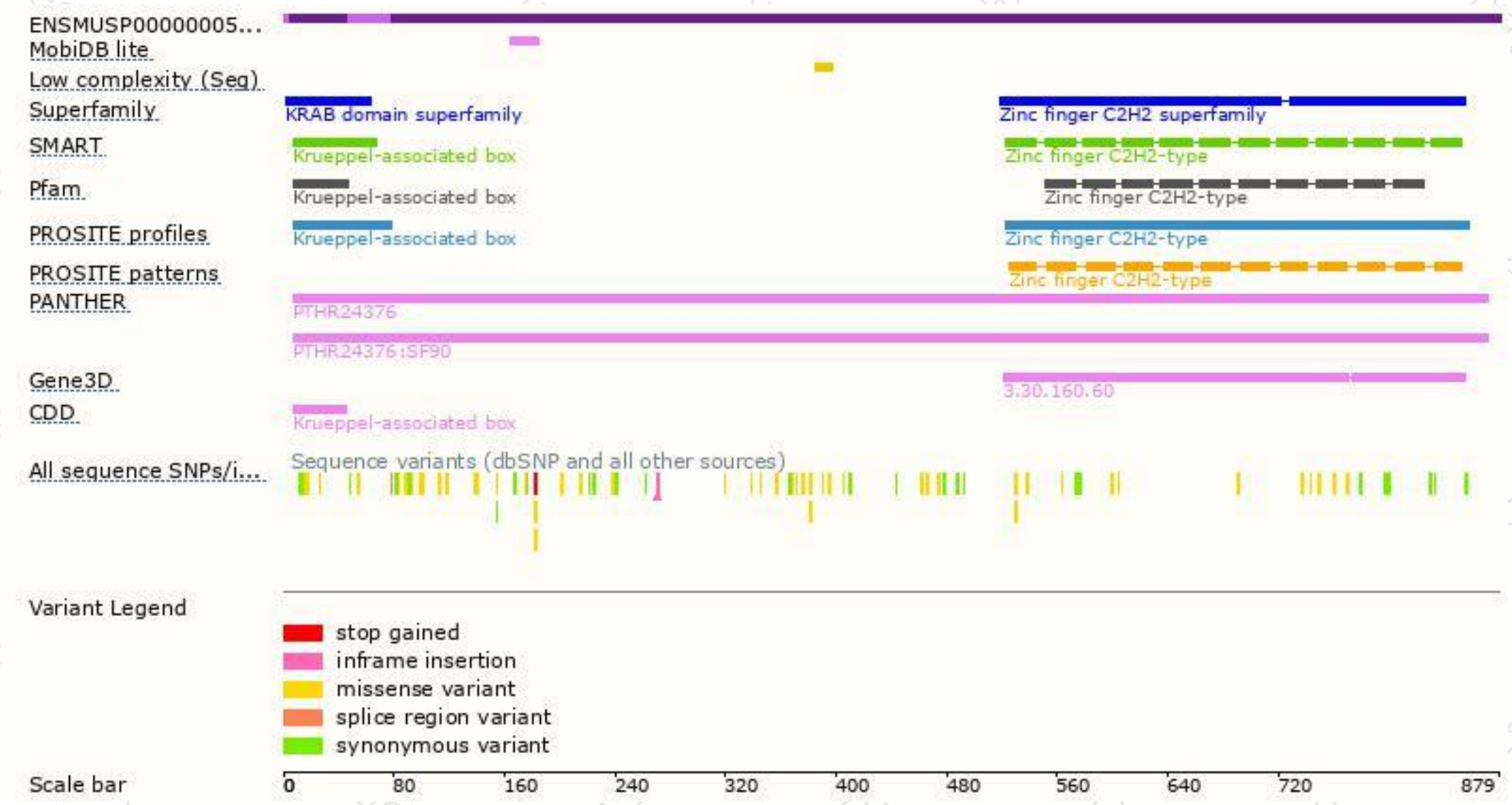
The strategy is based on the design of *Zfp112-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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