

Zfp354c Cas9-KO Strategy

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Reviewer:

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Project Overview

Project Name

Zfp354c

Project type

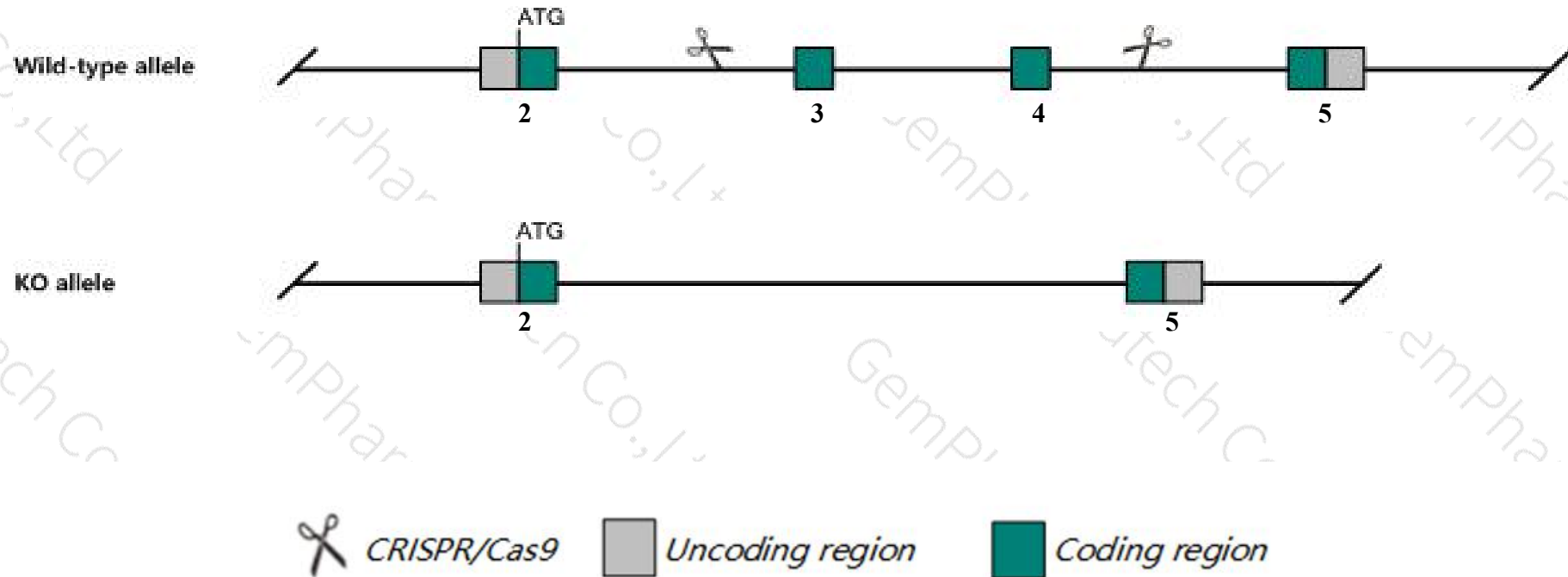
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zfp354c* gene. The schematic diagram is as follows:



- The *Zfp354c* gene has 4 transcripts. According to the structure of *Zfp354c* gene, exon3-exon4 of *Zfp354c-202* (ENSMUST00000109135.8) transcript is recommended as the knockout region. The region contains 220bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Zfp354c* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Zfp354c* 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)

Zfp354c zinc finger protein 354C [*Mus musculus* (house mouse)]

Gene ID: 30944, updated on 12-Aug-2019

Summary

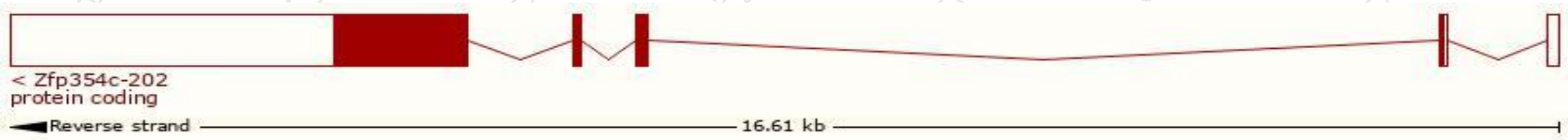
Official Symbol Zfp354c provided by [MGI](#)
Official Full Name zinc finger protein 354C provided by [MGI](#)
Primary source [MGI:MGI:1353621](#)
See related [Ensembl:ENSMUSG00000044807](#)
Gene type protein coding
RefSeq status VALIDATED
Organism [Mus musculus](#)
Lineage Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as AJ18; Kid3; Tcf17l2; Znf354c; AW743325; mKIAA4218; 5330421P20Rik
Expression Biased expression in CNS E18 (RPKM 9.9), limb E14.5 (RPKM 9.5) and 11 other tissues [See more](#)
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

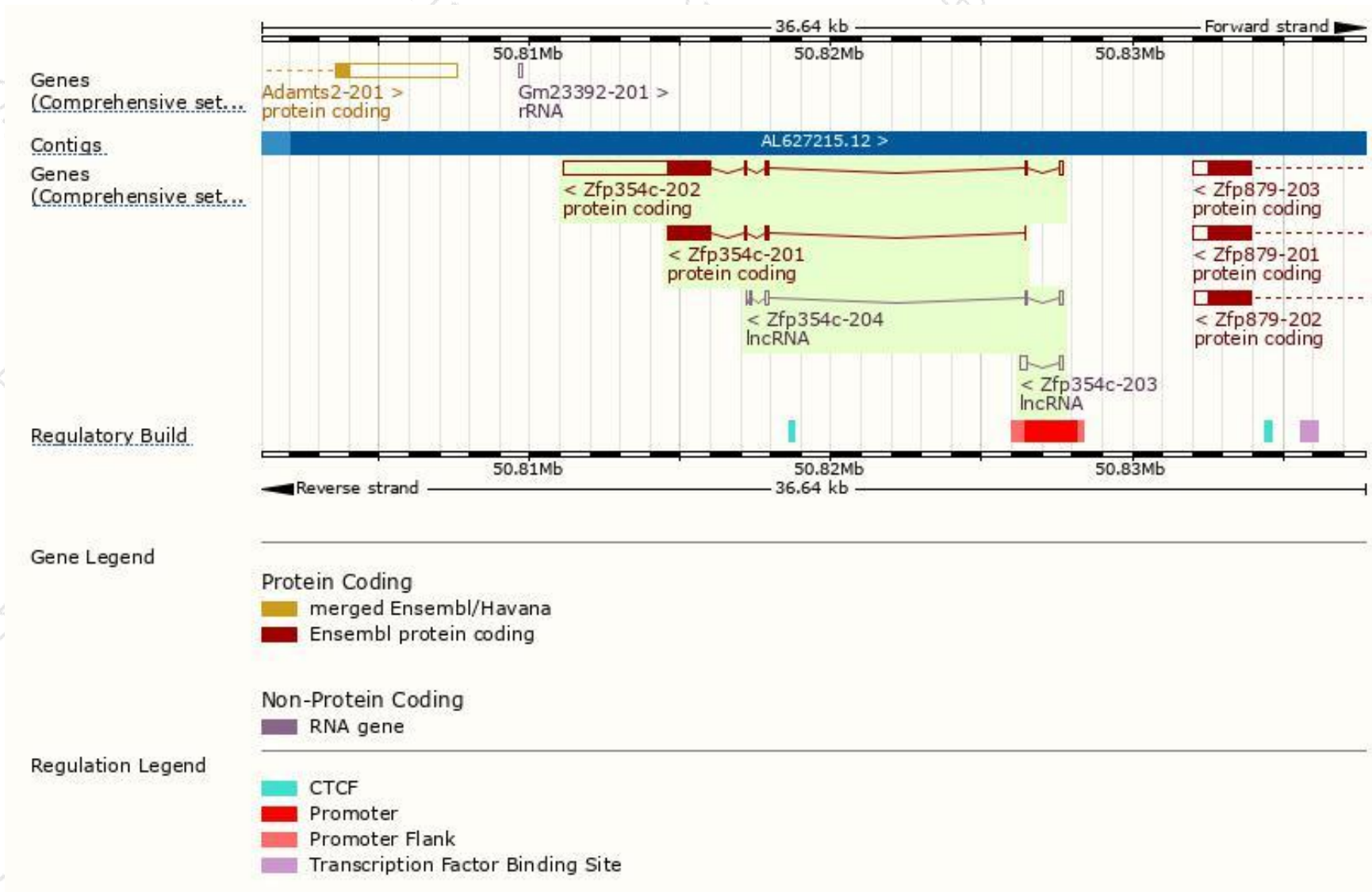
The gene has 4 transcripts,all transcripts are shown below:

| Name | Transcript ID | bp | Protein | Biotype | CCDS | UniProt | Flags |
|-------------|--------------------------------------|------|-----------------------|----------------|---------------------------|------------------------|-------------------------------|
| Zfp354c-202 | ENSMUST00000109135.8 | 5325 | 560aa | Protein coding | CCDS24637 | Q571J5 | TSL:1 GENCODE basic APPRIS P1 |
| Zfp354c-201 | ENSMUST00000000632.6 | 1683 | 560aa | Protein coding | CCDS24637 | Q571J5 | TSL:1 GENCODE basic APPRIS P1 |
| Zfp354c-204 | ENSMUST00000139465.1 | 426 | No protein | lncRNA | - | - | TSL:3 |
| Zfp354c-203 | ENSMUST00000136333.1 | 381 | No protein | lncRNA | - | - | TSL:2 |

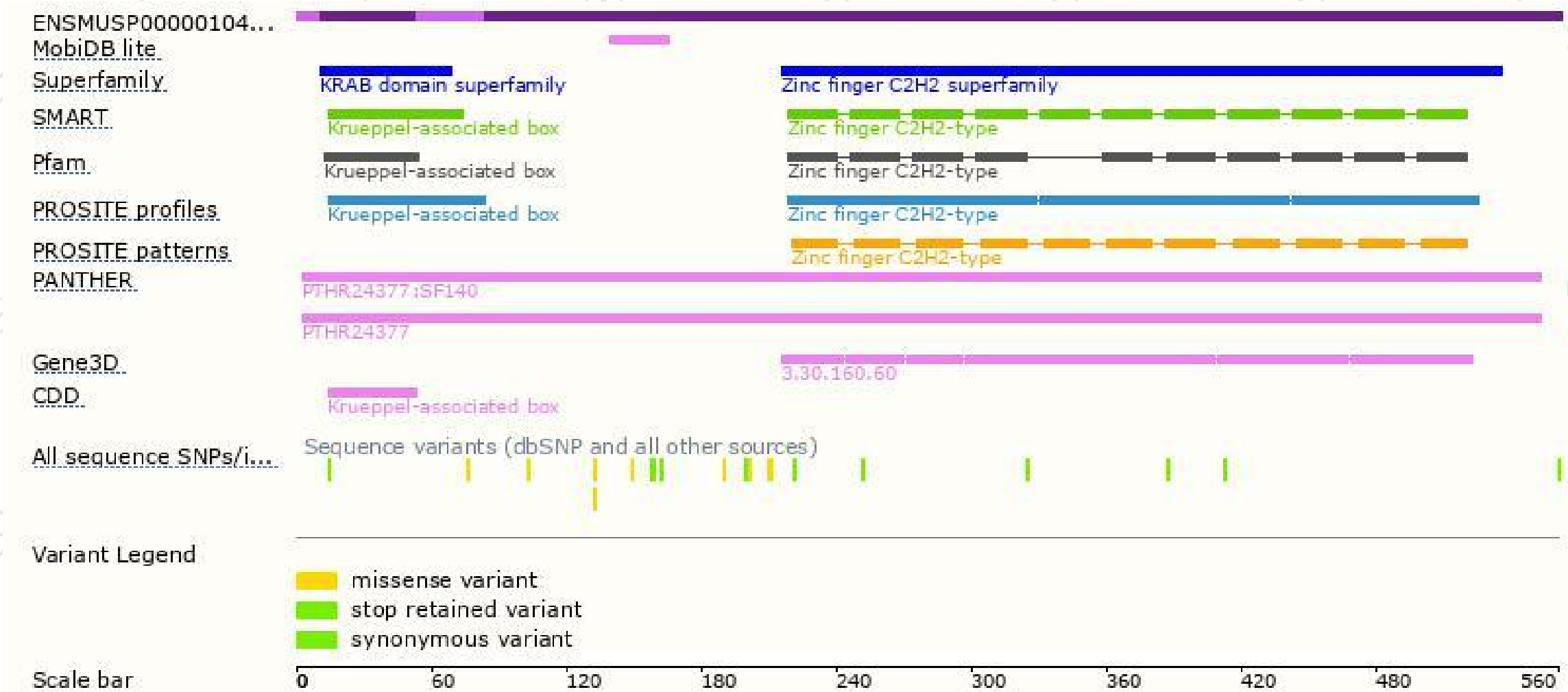
The strategy is based on the design of *Zfp354c-202* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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