Zfp90 Cas9-KO Strategy

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Project Overview

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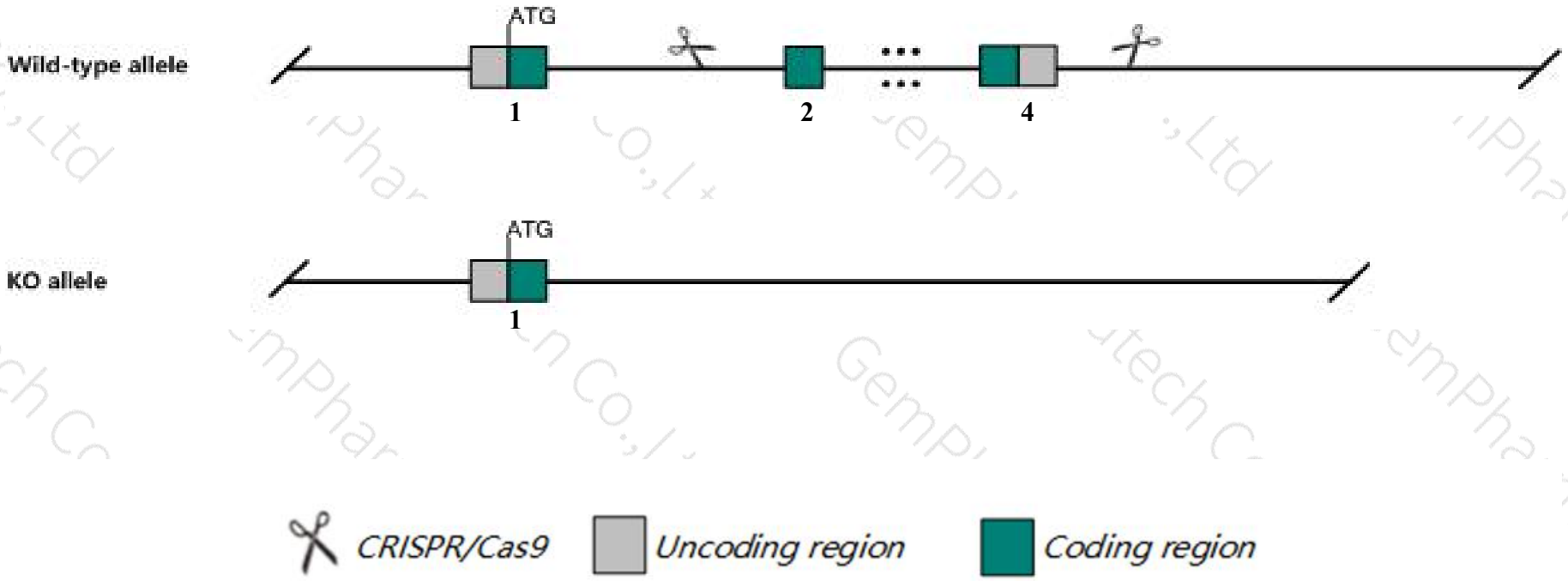
Project Name	***Zfp90***
Project type	**Cas9-KO**
Strain background	**C57BL/6JGpt**

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zfp90* gene. The schematic diagram is as follows:



Technical routes

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- The *Zfp90* gene has 6 transcripts. According to the structure of *Zfp90* gene, exon2-exon4 of *Zfp90-201* (ENSMUST00000034382.7) 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 *Zfp90* gene. The brief process is as follows: CRISPR/Cas9 system

Notice

- The *Zfp90* gene is located on the Chr8. 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

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Zfp90 zinc finger protein 90 [*Mus musculus* (house mouse)]

Gene ID: 22751, updated on 10-Oct-2019

Summary

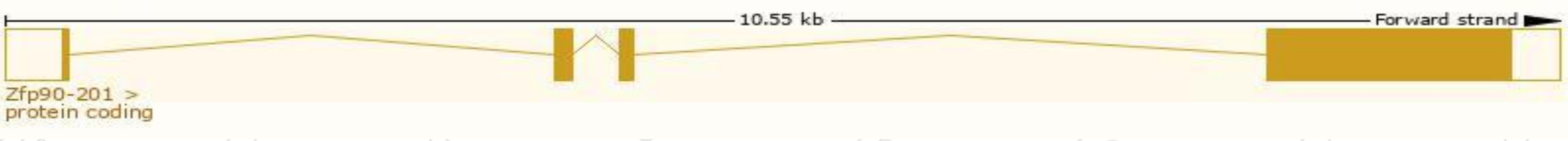
Official Symbol	Zfp90 provided by MGI
Official Full Name	zinc finger protein 90 provided by MGI
Primary source	MGI:MGI:104786
See related	Ensembl:ENSMUSG00000031907
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	NK10; Zfp64; Zfp83; KRAB17; mKIAA1954; 6430515L01Rik
Expression	Broad expression in CNS E18 (RPKM 6.3), CNS E14 (RPKM 6.0) and 23 other tissues See more
Orthologs	human all

Transcript information Ensembl

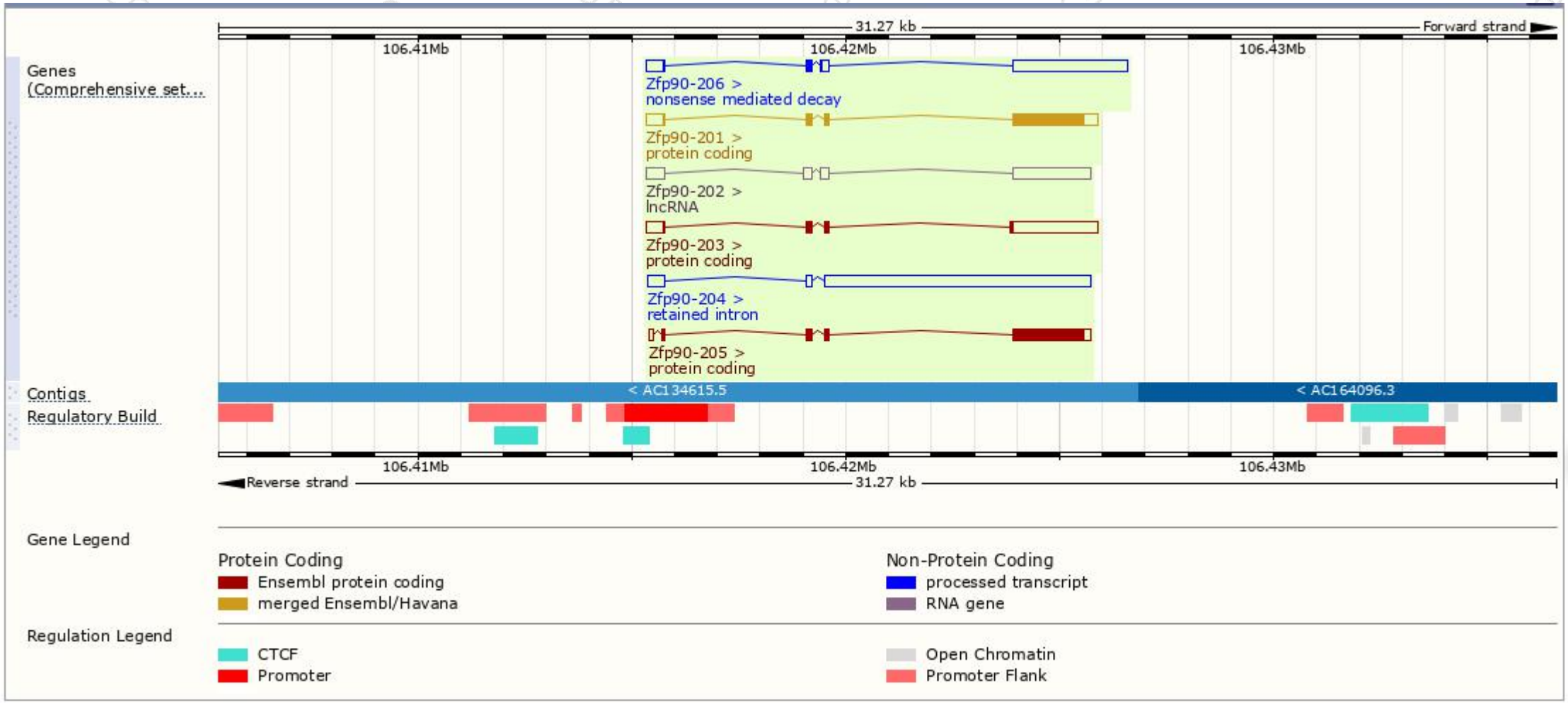
The gene has 6 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zfp90-201	ENSMUST00000034382.7	2632	636aa	Protein coding	CCDS22635	Q61967	TSL:1 GENCODE basic APPRIS P1
Zfp90-205	ENSMUST00000212874.1	2195	636aa	Protein coding	CCDS22635	Q61967	TSL:1 GENCODE basic APPRIS P1
Zfp90-203	ENSMUST00000212606.1	2685	103aa	Protein coding	-	A0A1D5RLP9	TSL:1 GENCODE basic
Zfp90-206	ENSMUST00000213045.1	3447	60aa	Nonsense mediated decay	-	A0A1D5RMM0	TSL:1
Zfp90-204	ENSMUST00000212866.1	6731	No protein	Retained intron	-	-	TSL:1
Zfp90-202	ENSMUST00000211958.1	2639	No protein	lncRNA	-	-	TSL:1

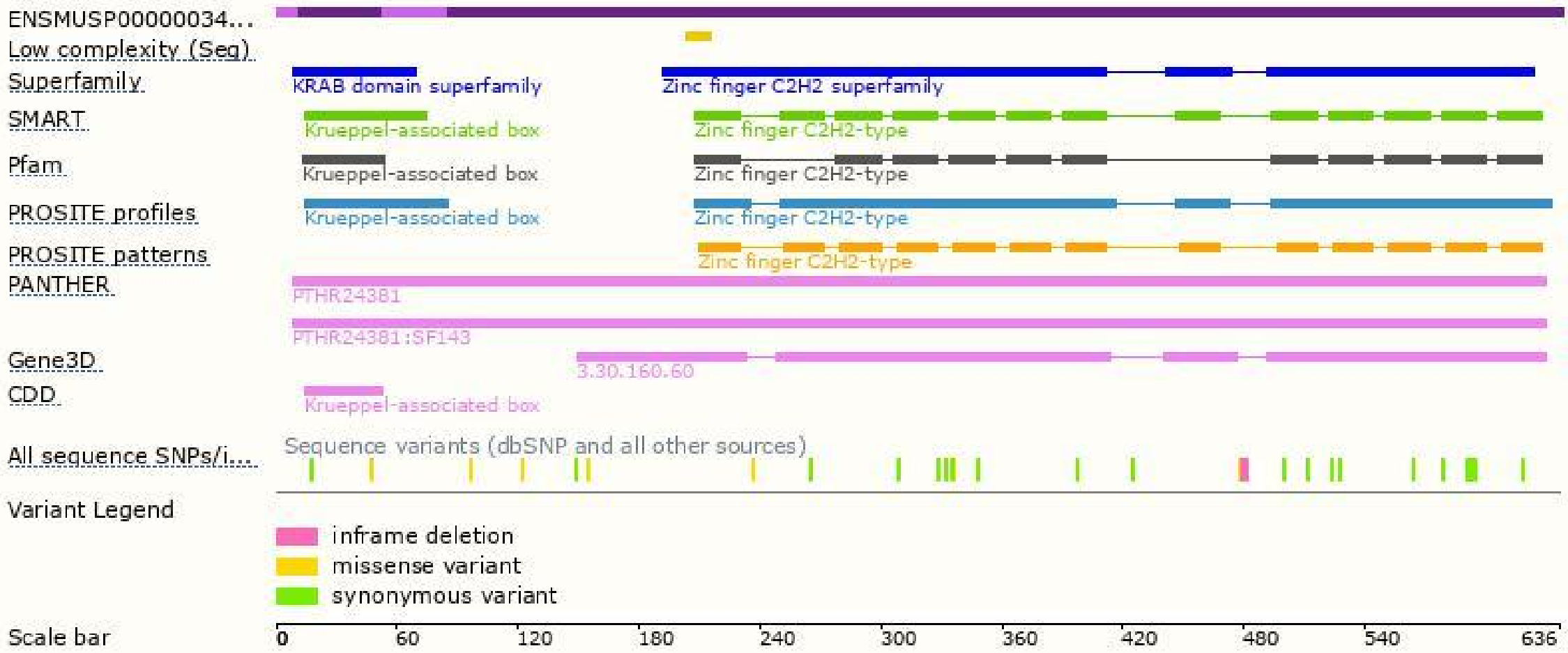
The strategy is based on the design of *Zfp90-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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