

***Zfp608* Cas9-KO Strategy**

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Design Date: 2020-9-23

Project Overview

Project Name

Zfp608

Project type

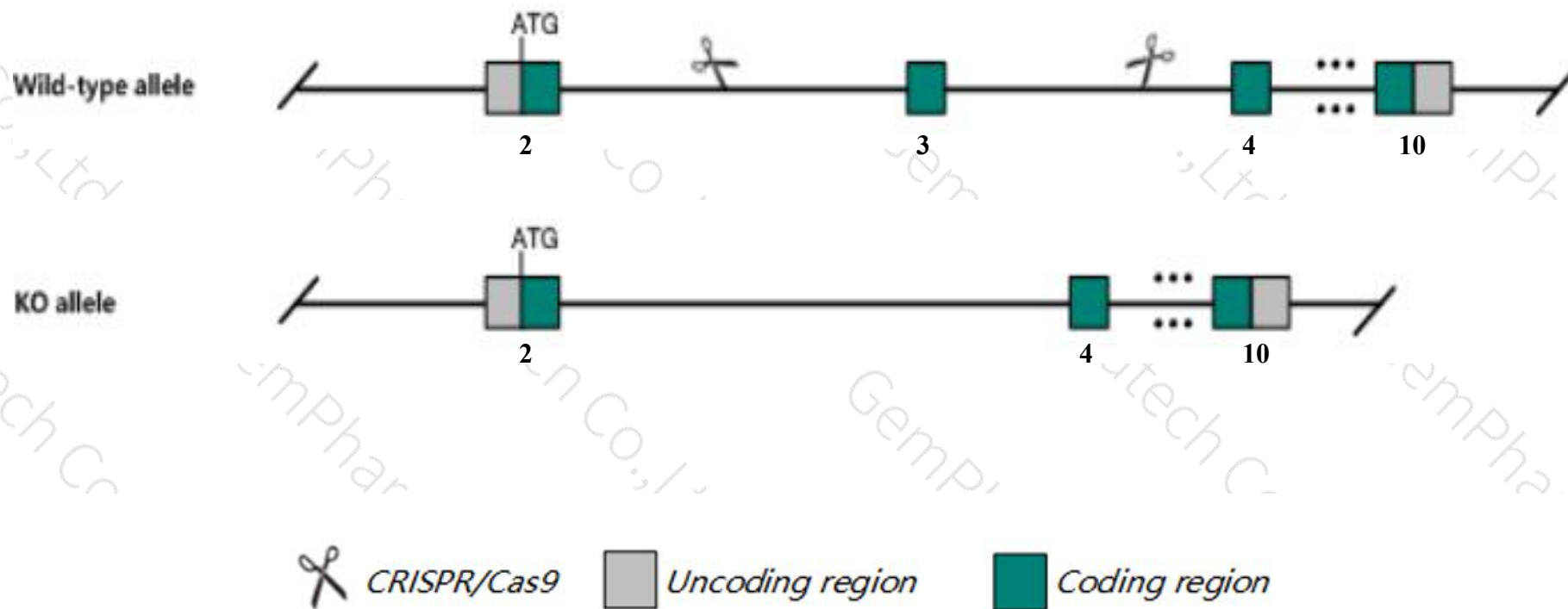
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zfp608* gene. The schematic diagram is as follows:



- The *Zfp608* gene has 4 transcripts. According to the structure of *Zfp608* gene, exon3 of *Zfp608*-201(ENSMUST00000064763.6) transcript is recommended as the knockout region. The region contains 256bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Zfp608* 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 *Zfp608* gene is located on the Chr18. 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.
- Transcript *Zfp608-202* may not be affected.
- 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)

Zfp608 zinc finger protein 608 [Mus musculus (house mouse)]

Gene ID: 269023, updated on 13-Mar-2020

Summary



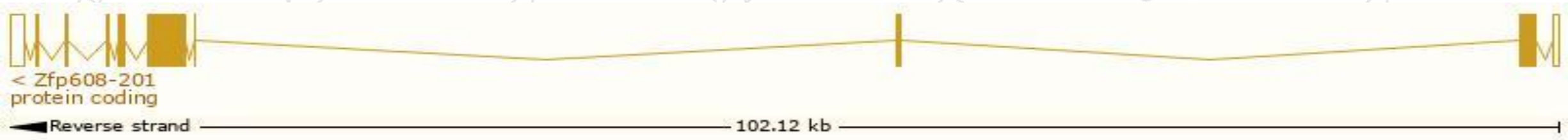
Official Symbol	Zfp608 provided by MGI
Official Full Name	zinc finger protein 608 provided by MGI
Primary source	MGI:MGI:2442338
See related	Ensembl:ENSMUSG00000052713
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	4932417D18Rik, D430007A19Rik, Znf608
Expression	Broad expression in CNS E14 (RPKM 3.8), whole brain E14.5 (RPKM 3.5) and 27 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

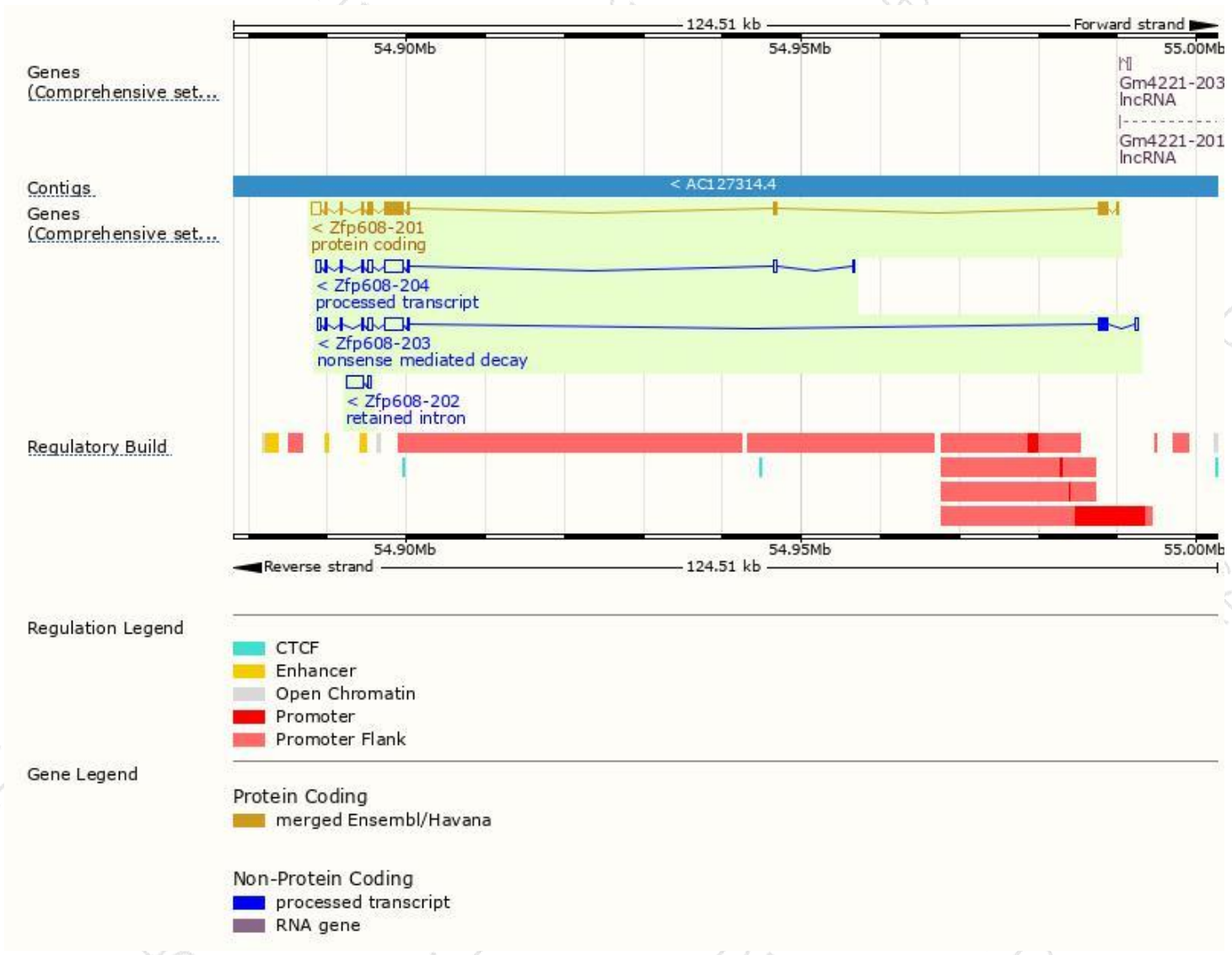
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zfp608-201	ENSMUST00000064763.6	6095	1511aa	Protein coding	CCDS37824	B9EKR3 Q56A10	TSL:1 GENCODE basic APPRIS P1
Zfp608-203	ENSMUST00000237844.1	5101	303aa	Nonsense mediated decay	-	A0A494B9K3	
Zfp608-204	ENSMUST00000238150.1	4243	No protein	Processed transcript	-	-	
Zfp608-202	ENSMUST00000237009.1	2486	No protein	Retained intron	-	-	

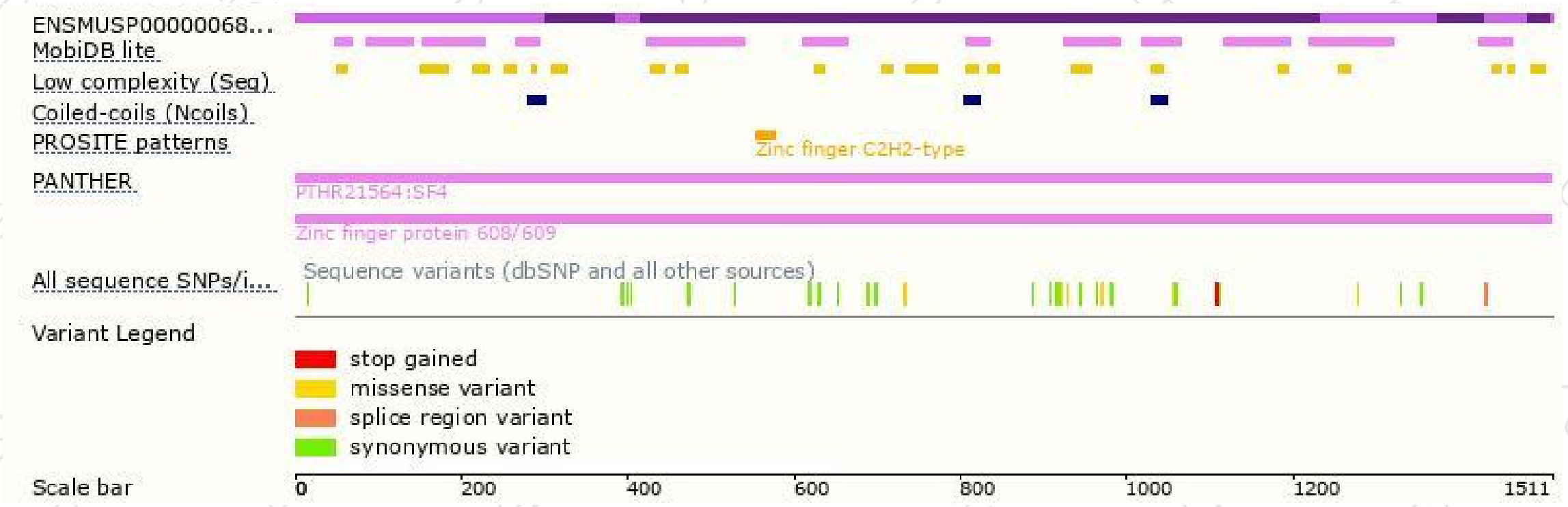
The strategy is based on the design of *Zfp608-201* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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

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