

Fam98a Cas9-KO Strategy

Designer:

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Project Overview

Project Name

Fam98a

Project type

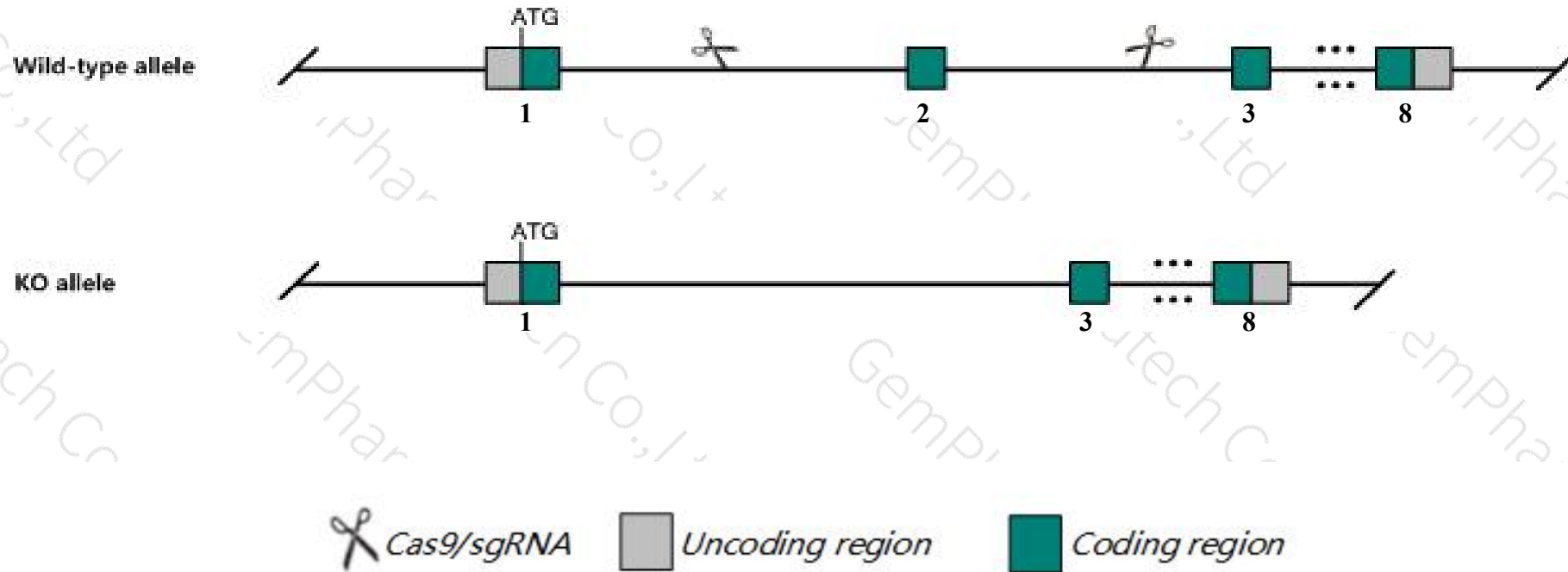
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Fam98a* gene. The schematic diagram is as follows:



- The *Fam98a* gene has 5 transcripts. According to the structure of *Fam98a* gene, exon2 of *Fam98a-201* (ENSMUST00000112507.3) transcript is recommended as the knockout region. The region contains 149bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Fam98a* gene. The brief process is as follows: sgRNA was transcribed in vitro. Cas9 and sgRNA 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 *Fam98a* gene is located on the Chr17. 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)

Fam98a family with sequence similarity 98, member A [Mus musculus (house mouse)]

Gene ID: 72722, updated on 31-Jan-2019

Summary

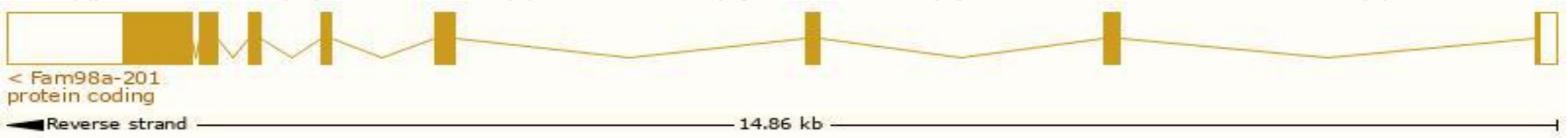
Official Symbol	Fam98a provided by MGI
Official Full Name	family with sequence similarity 98, member A provided by MGI
Primary source	MGI:MGI:1919972
See related	Ensembl:ENSMUSG00000002017
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2810405J04Rik, AL024114
Expression	Ubiquitous expression in testis adult (RPKM 23.3), placenta adult (RPKM 15.0) and 24 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

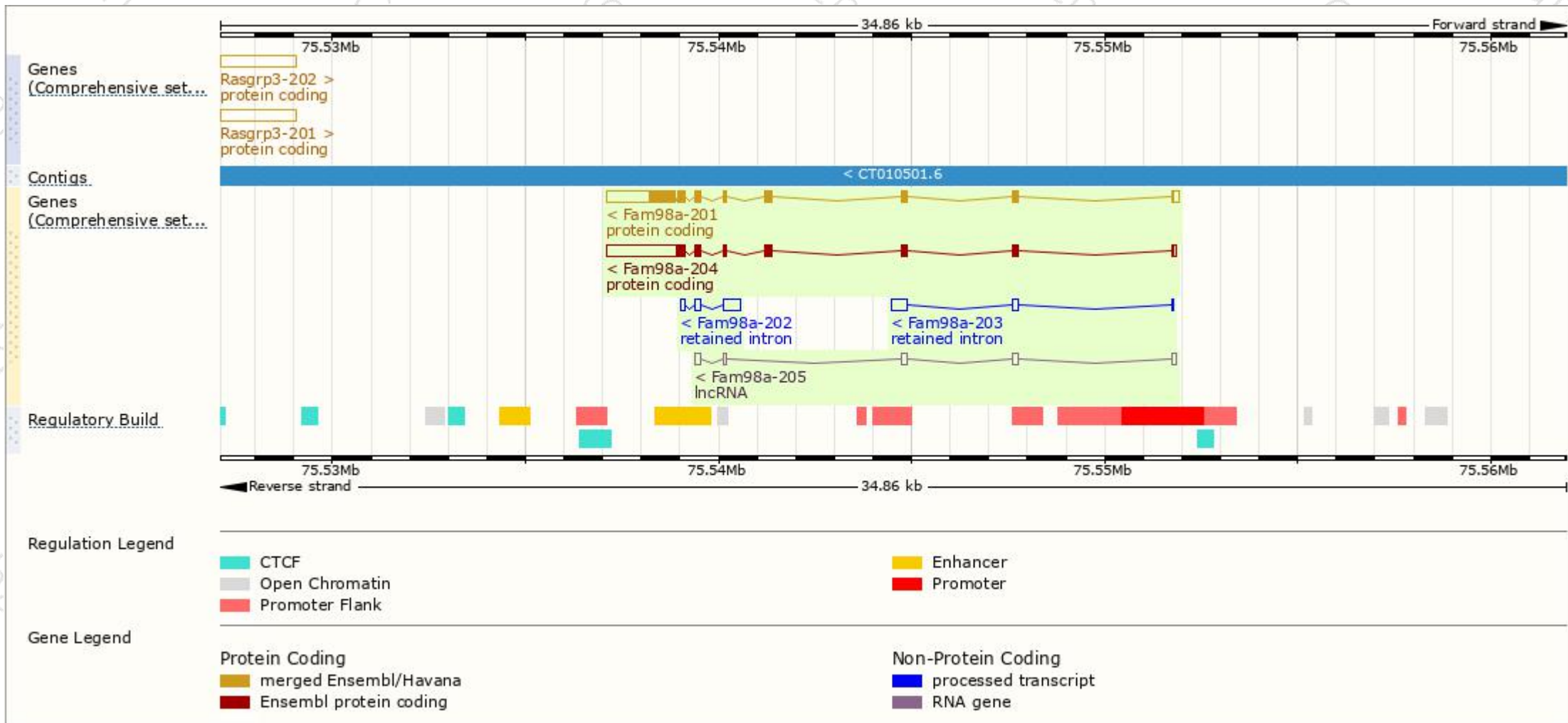
The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Fam98a-201	ENSMUST00000112507.3	2817	515aa	Protein coding	CCDS28974	Q3TJZ6	TSL:1 GENCODE basic APPRIS P1
Fam98a-204	ENSMUST00000234785.1	2809	308aa	Protein coding	-	-	GENCODE basic
Fam98a-202	ENSMUST00000140729.1	663	No protein	Retained intron	-	-	TSL:2
Fam98a-203	ENSMUST00000141969.1	621	No protein	Retained intron	-	-	TSL:2
Fam98a-205	ENSMUST00000235026.1	615	No protein	lncRNA	-	-	-

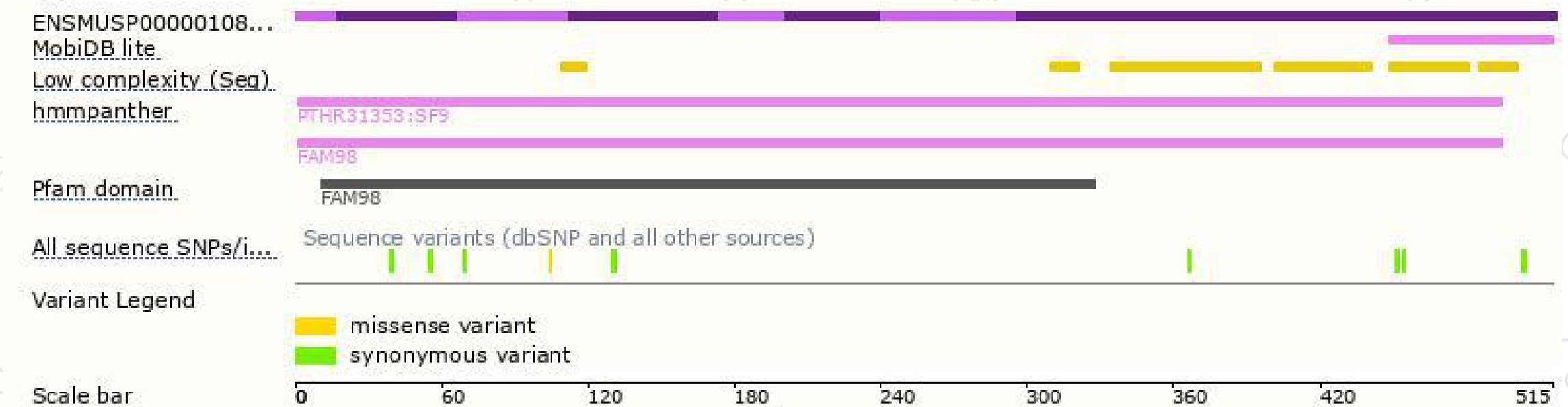
The strategy is based on the design of *Fam98a-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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