

Med13l Cas9-CKO Strategy

Designer:

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Project Overview

Project Name

Med13l

Project type

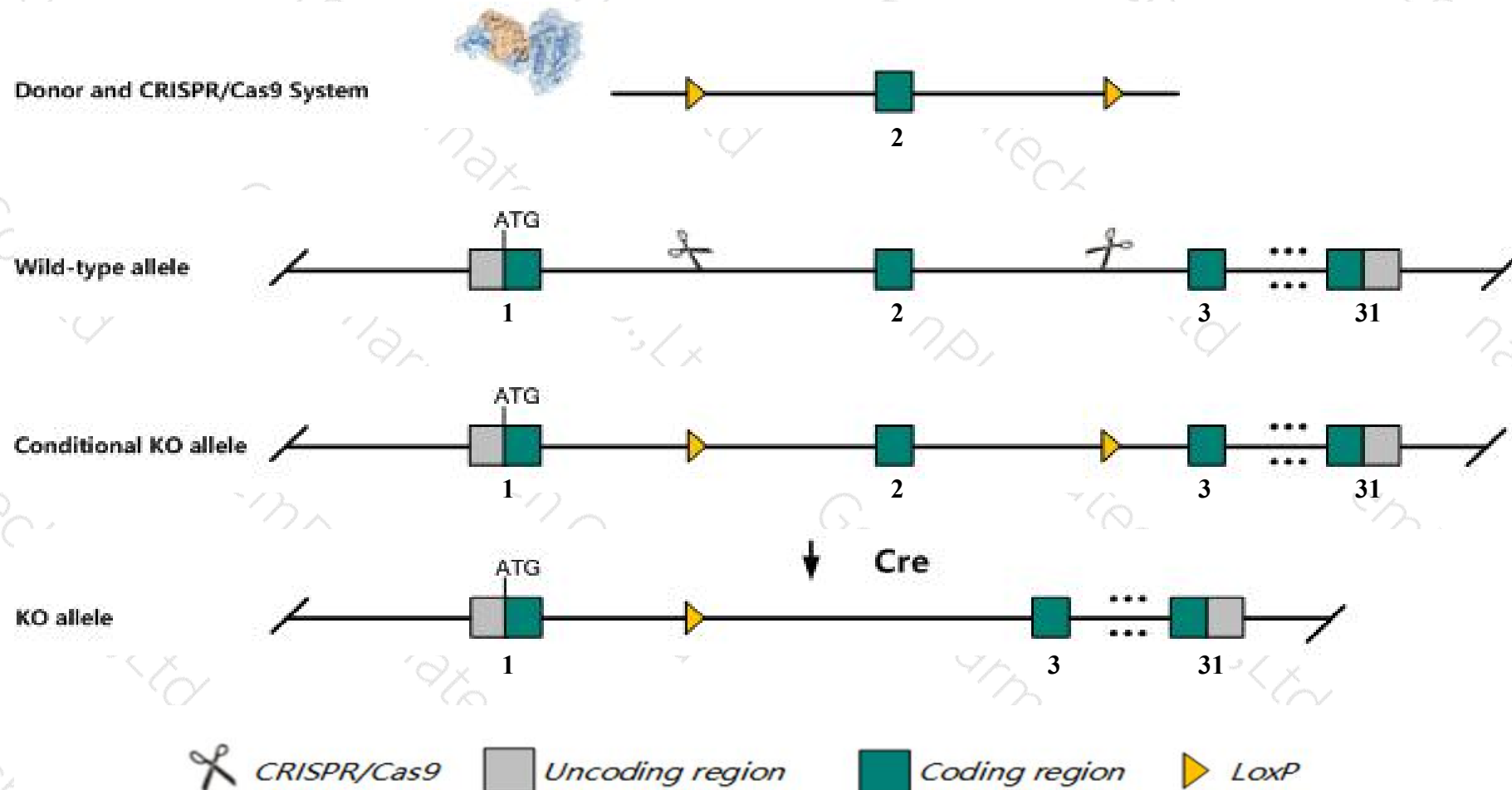
Cas9-CKO

Strain background

C57BL/6JGpt

Conditional Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Med13l* gene. The schematic diagram is as follows:



- The *Med13l* gene has 6 transcripts. According to the structure of *Med13l* gene, exon2 of *Med13l-201* (ENSMUST00000100816.7) transcript is recommended as the knockout region. The region contains 238bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Med13l* gene. The brief process is as follows: CRISPR/Cas9 system and Donor 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 flox mice will be knocked out after mating with mice expressing Cre recombinase, resulting in the loss of function of the target gene in specific tissues and cell types.

Notice

- The *Med13l* gene is located on the Chr5. 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 loxp insertion on gene transcription, RNA splicing and protein translation cannot be predicted at existing technological level.

Gene information (NCBI)

Med13l mediator complex subunit 13-like [Mus musculus (house mouse)]

Gene ID: 76199, updated on 31-Jan-2019

Summary



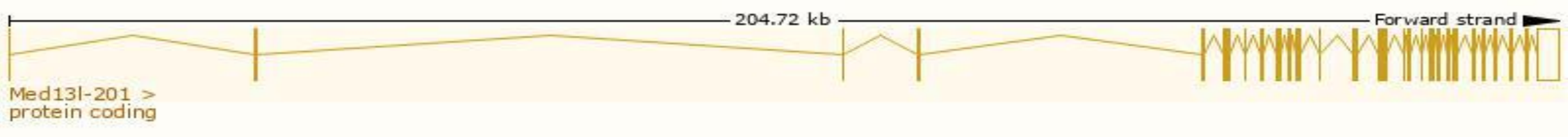
Official Symbol	Med13l provided by MGI
Official Full Name	mediator complex subunit 13-like provided by MGI
Primary source	MGI:MGI:2670178
See related	Ensembl:ENSMUSG00000018076
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2210413I17Rik, 6330591G05Rik, 9030618F05Rik, Thrap2, Trap240L, mKIAA1025
Expression	Ubiquitous expression in thymus adult (RPKM 10.1), spleen adult (RPKM 6.5) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

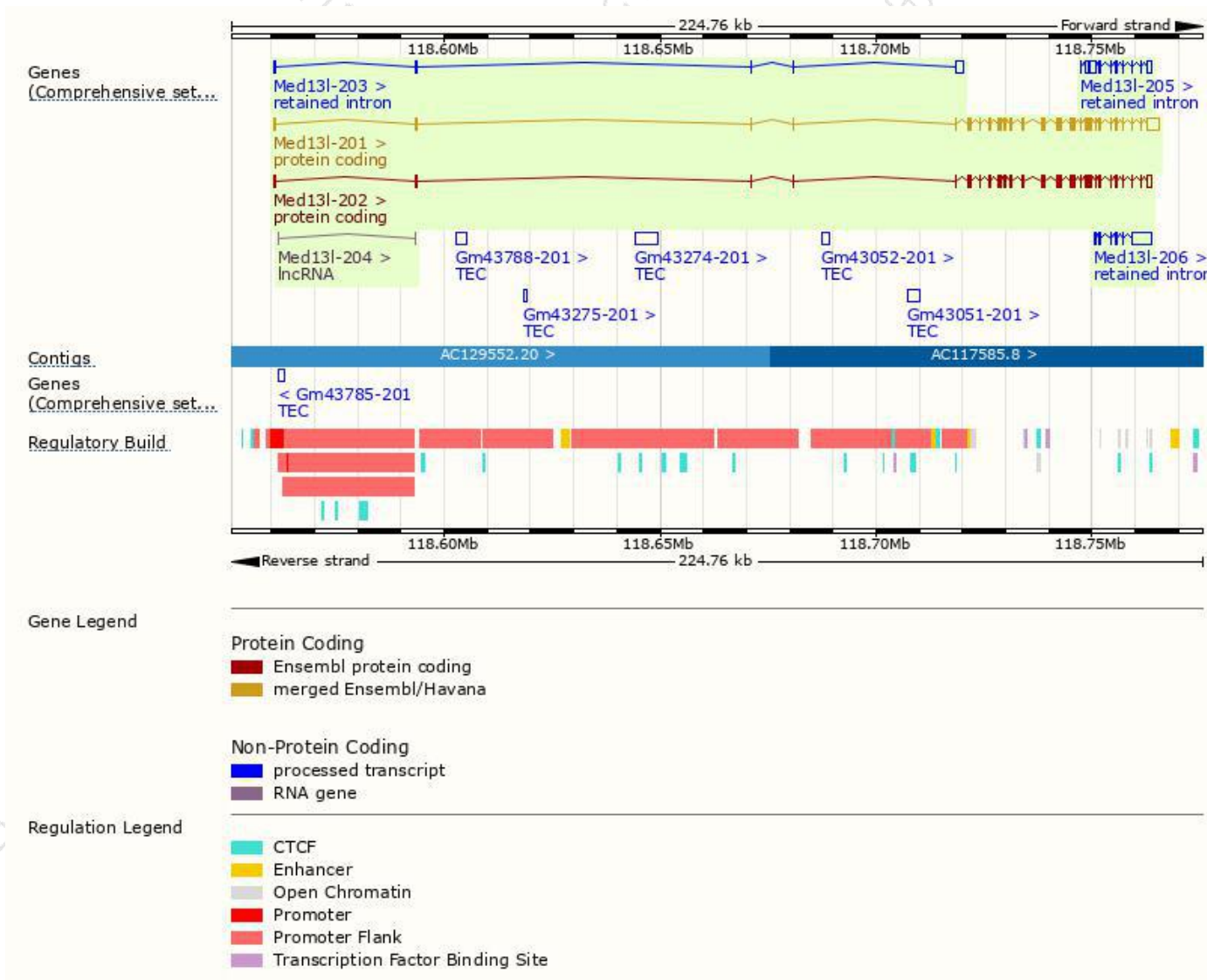
The gene has 6 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Med13l-201	ENSMUST00000100816.7	9296	2207aa	Protein coding	CCDS57375	E9QLJ3	TSL:2 GENCODE basic APPRIS P3
Med13l-202	ENSMUST00000201010.1	7781	2216aa	Protein coding	CCDS84948	A0A0J9YUA8	TSL:5 GENCODE basic APPRIS ALT2
Med13l-206	ENSMUST00000202787.1	6324	No protein	Retained intron	-	-	TSL:1
Med13l-205	ENSMUST00000202538.3	4389	No protein	Retained intron	-	-	TSL:1
Med13l-203	ENSMUST00000201614.1	2218	No protein	Retained intron	-	-	TSL:2
Med13l-204	ENSMUST00000201696.1	444	No protein	lncRNA	-	-	TSL:2

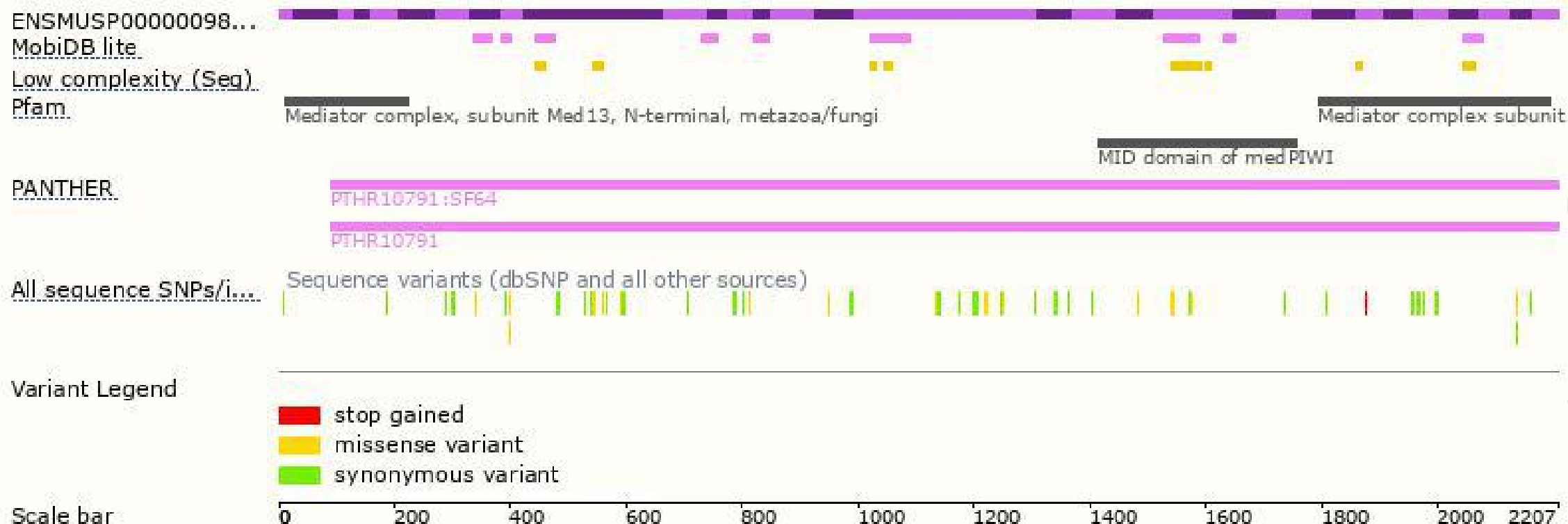
The strategy is based on the design of *Med13l-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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