

***Med6* Cas9-KO Strategy**

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Project Overview

Project Name

Med6

Project type

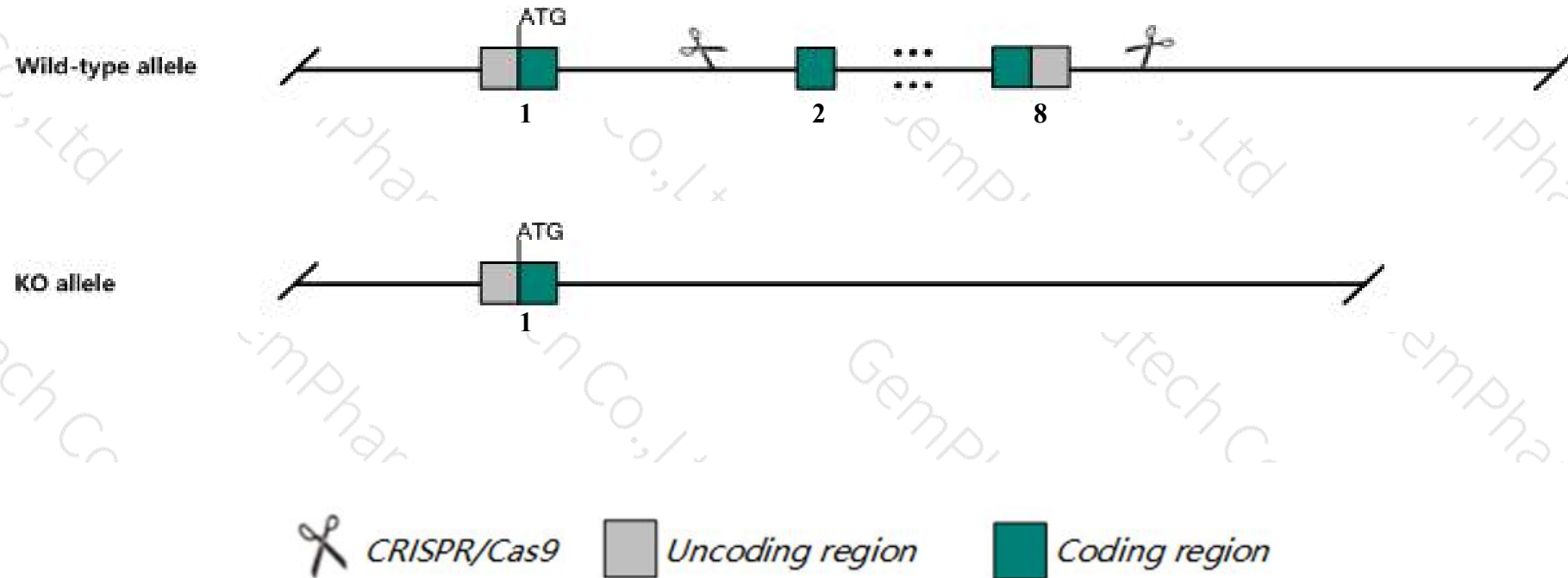
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Med6* gene. The schematic diagram is as follows:



- The *Med6* gene has 6 transcripts. According to the structure of *Med6* gene, exon2-exon8 of *Med6-204* (ENSMUST00000161211.7) 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 *Med6* gene. The brief process is as follows: CRISPR/Cas9 system

- *Gm16570* and *Gm16572* gene will be deleted.
- The knockout region is near to the N-terminal of *Adam21* gene, this strategy may influence the regulatory function of the N-terminal of *Adam21* gene.
- The *Med6* gene is located on the Chr12. 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)

Med6 mediator complex subunit 6 [*Mus musculus* (house mouse)]

Gene ID: 69792, updated on 27-Feb-2020

Summary

Official Symbol Med6 provided by [MGI](#)
Official Full Name mediator complex subunit 6 provided by [MGI](#)
Primary source [MGI:MGI:1917042](#)
See related [Ensembl:ENSMUSG00000002679](#)
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 AU019660; AV213303; 1500012F11Rik
Expression Broad expression in CNS E11.5 (RPKM 20.3), placenta adult (RPKM 18.1) and 21 other tissues [See more](#)
Orthologs [human](#) [all](#)

Genomic context

Location: 12; 12 D1 See Med6 in [Genome Data Viewer](#)

Exon count: 9

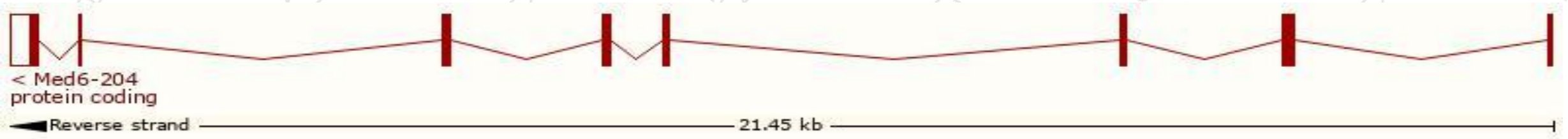
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	12	NC_000078.6 (81573557..81595008, complement)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	12	NC_000078.5 (82674551..82695945, complement)

Transcript information (Ensembl)

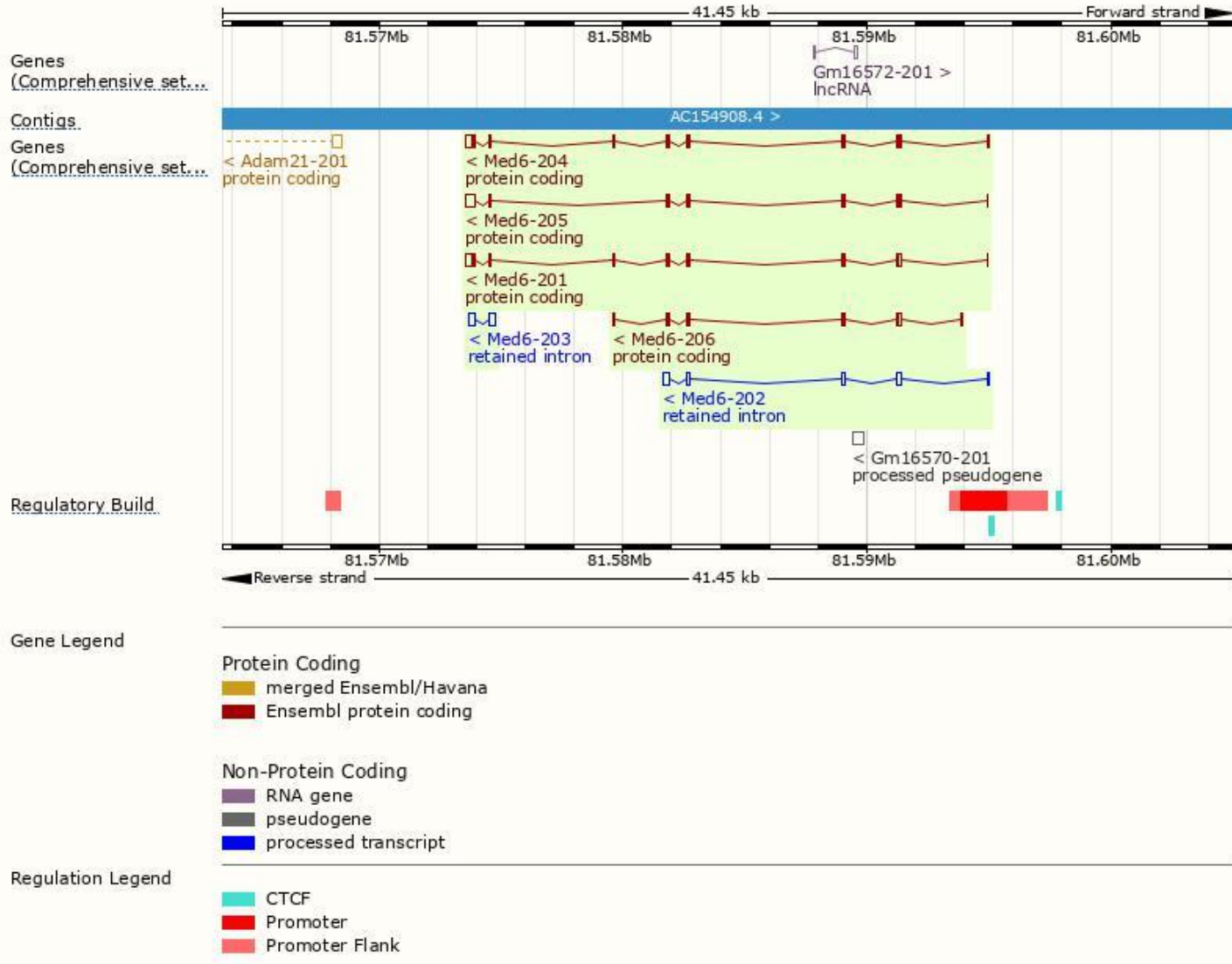
The gene has 6 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Med6-204	ENSMUST00000161211.7	1059	246aa	Protein coding	CCDS83983	Q921D4	TSL:1 GENCODE basic APPRIS P1
Med6-201	ENSMUST00000002756.13	1003	195aa	Protein coding	CCDS26023	A0A0R4IZX3	TSL:1 GENCODE basic
Med6-205	ENSMUST00000161598.7	897	181aa	Protein coding	CCDS83982	E0CYA6	TSL:5 GENCODE basic
Med6-206	ENSMUST00000161902.1	596	132aa	Protein coding	-	E0CXQ3	CDS 3' incomplete TSL:3
Med6-202	ENSMUST00000159187.1	636	No protein	Retained intron	-	-	TSL:2
Med6-203	ENSMUST00000160739.1	487	No protein	Retained intron	-	-	TSL:2

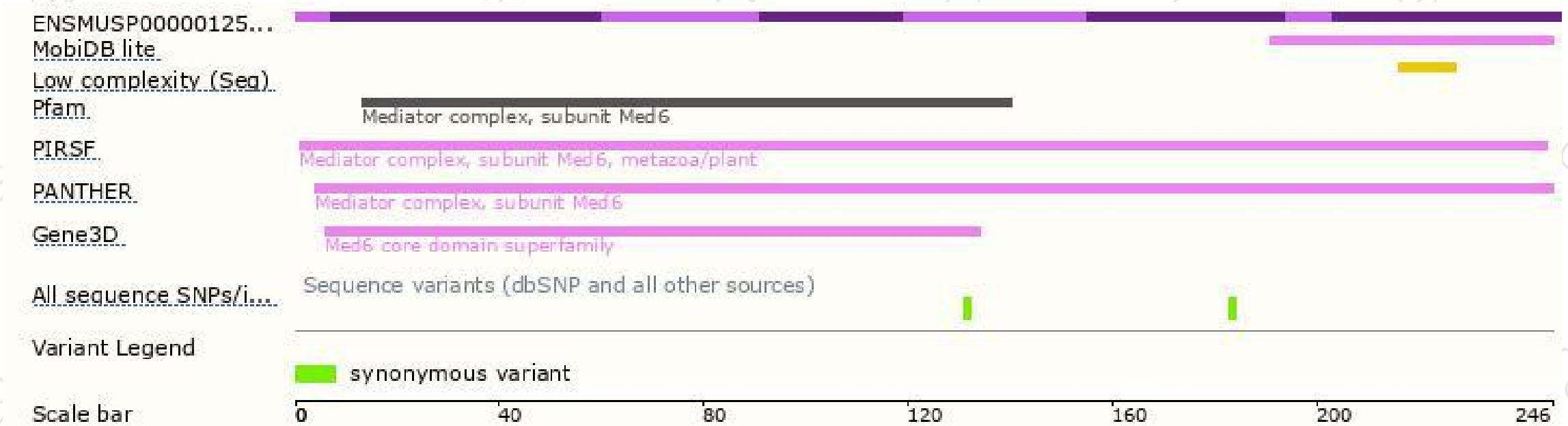
The strategy is based on the design of *Med6-204* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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