

***Trim56* Cas9-KO Strategy**

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Reviewer:

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Project Overview

Project Name

Trim56

Project type

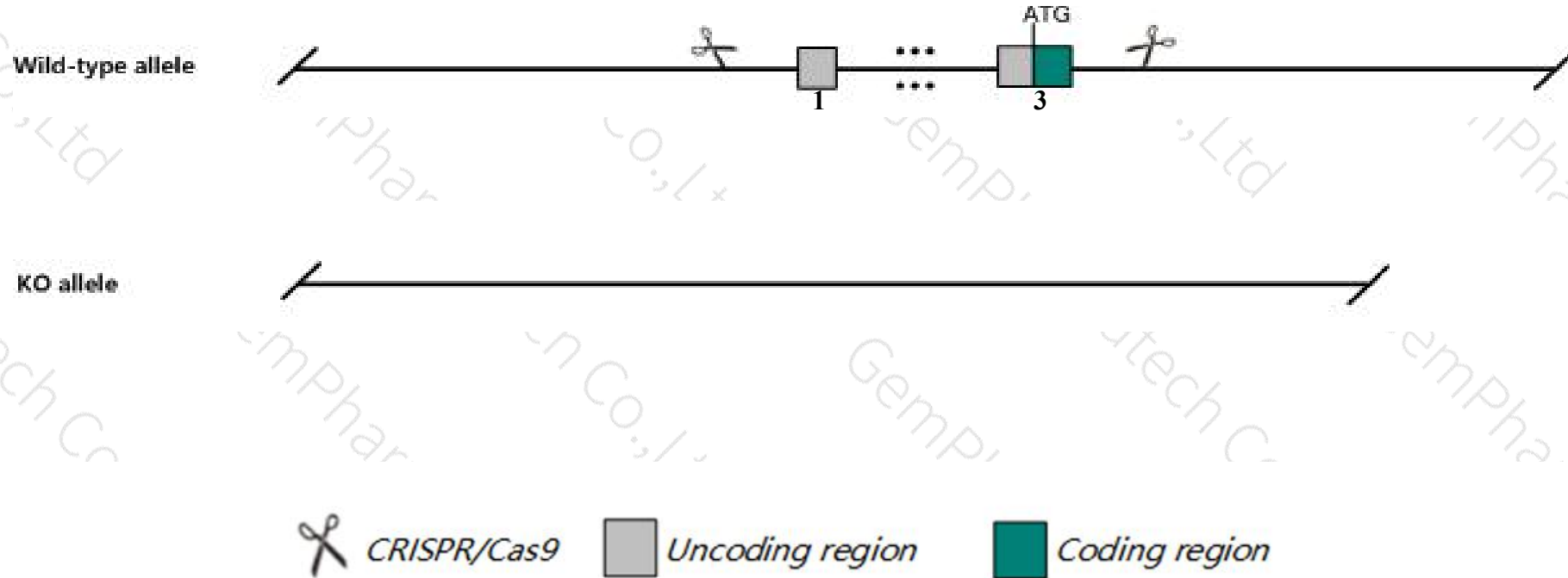
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Trim56* gene. The schematic diagram is as follows:



- The *Trim56* gene has 2 transcripts. According to the structure of *Trim56* gene, exon1-exon3 of *Trim56-201* (ENSMUST00000054384.5) 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 *Trim56* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Trim56* 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 the gene knockout on gene transcription, RNA splicing and protein translation cannot be predicted at the existing technology level.

Gene information (NCBI)

Trim56 tripartite motif-containing 56 [*Mus musculus* (house mouse)]

Gene ID: 384309, updated on 12-Aug-2019

Summary



Official Symbol Trim56 provided by [MGI](#)

Official Full Name tripartite motif-containing 56 provided by [MGI](#)

Primary source [MGI:MGI:2685298](#)

See related [Ensembl:ENSMUSG00000043279](#)

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 Gm452; RNF109; A130009K11Rik

Expression Broad expression in thymus adult (RPKM 6.7), spleen adult (RPKM 5.3) and 21 other tissues [See more](#)

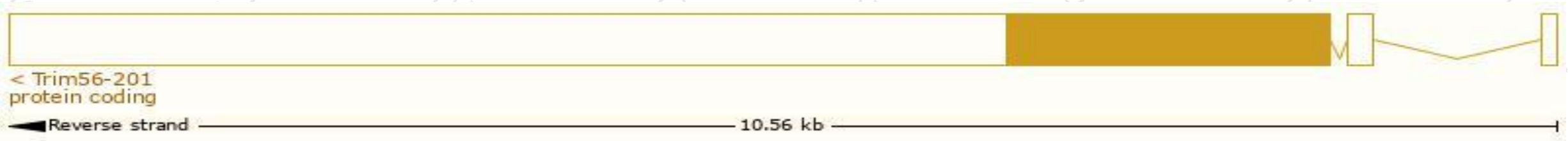
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

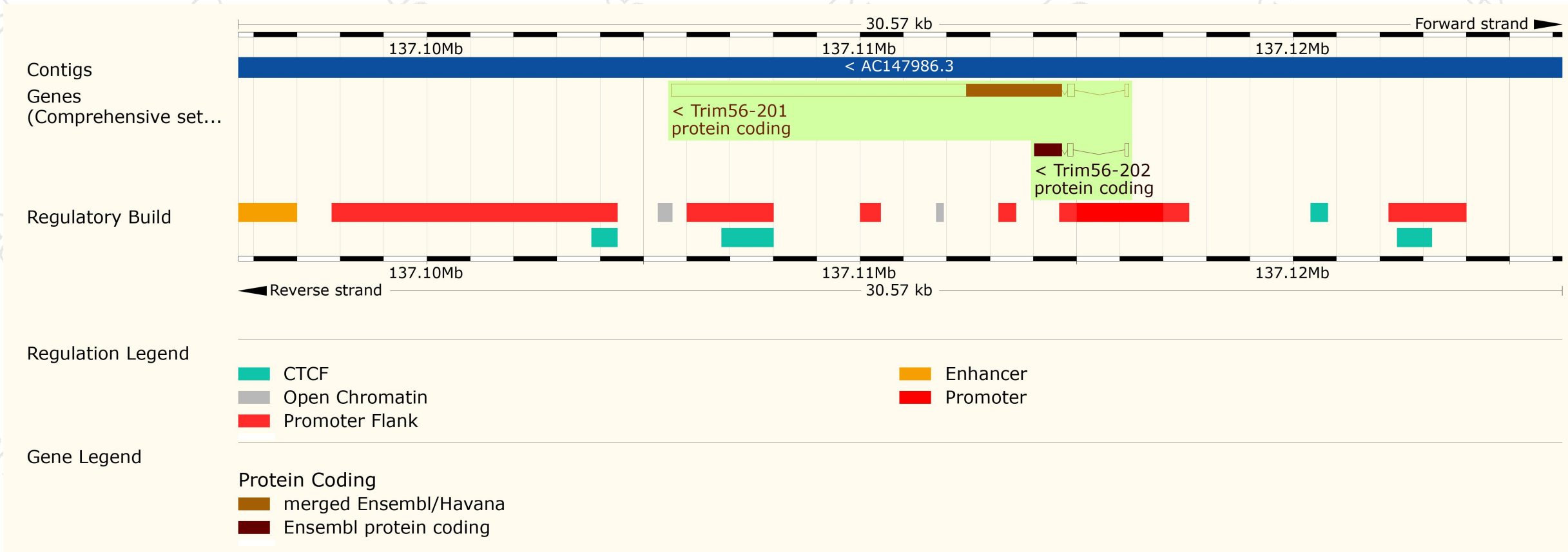
The gene has 2 transcripts,all transcripts are shown below:

Name ▲	Transcript ID ▲	bp ▲	Protein ▲	Translation ID ▲	Biotype ▲	CCDS ▲	UniProt ▲	Flags ▲
Trim56-201	ENSMUST00000054384.5	9279	734aa	ENSMUSP00000058109.5	Protein coding	CCDS19762	A0A0R4J0Q6	TSL:1 Gencode basic APPRIS P1
Trim56-202	ENSMUST00000152207.1	867	212aa	ENSMUSP00000117874.1	Protein coding	-	D3YVX5	CDS 3' incomplete TSL:3

The strategy is based on the design of *Trim56-201* 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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