

Tppp3 Cas9-KO Strategy

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Project Overview

Project Name

Tppp3

Project type

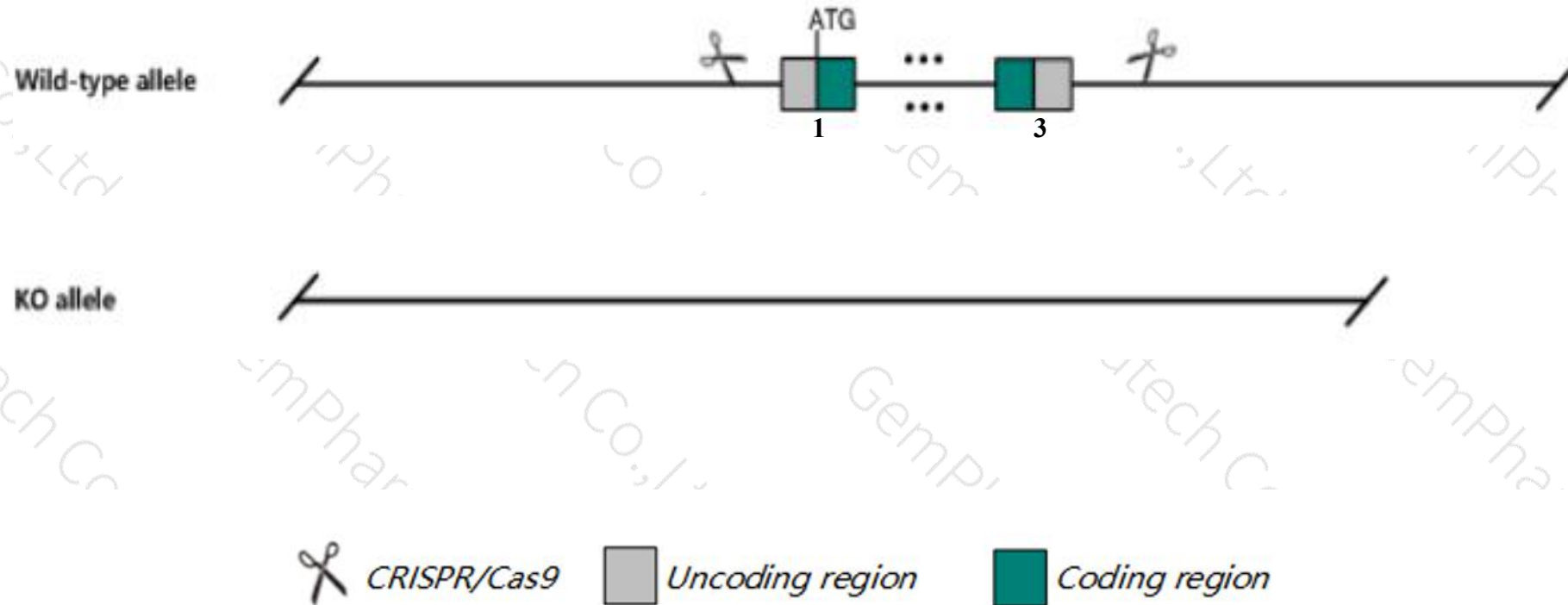
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Tppp3* gene. The schematic diagram is as follows:



- The *Tppp3* gene has 3 transcripts. According to the structure of *Tppp3* gene, exon1-exon3 of *Tppp3-202* (ENSMUST00000176419.1) transcript is recommended as the knockout region. The region contains all 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 *Tppp3* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Tppp3* gene is located on the Chr8. 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)

Tppp3 tubulin polymerization-promoting protein family member 3 [Mus musculus (house mouse)]

Gene ID: 67971, updated on 13-Mar-2020

Summary



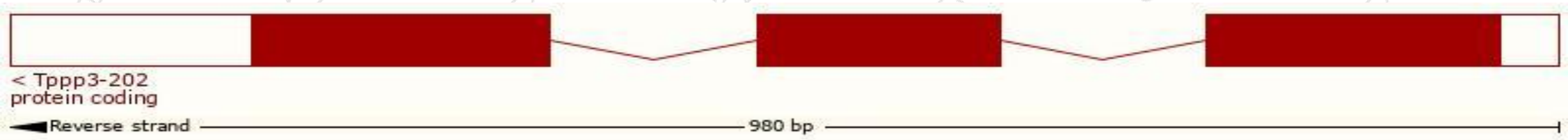
Official Symbol	Tppp3 provided by MGI
Official Full Name	tubulin polymerization-promoting protein family member 3 provided by MGI
Primary source	MGI:MGI:1915221
See related	Ensembl:ENSMUSG00000014846
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2700055K07Rik, CGI-38, Ceacam9, mmCGM8
Expression	Broad expression in lung adult (RPKM 106.8), colon adult (RPKM 48.8) and 19 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

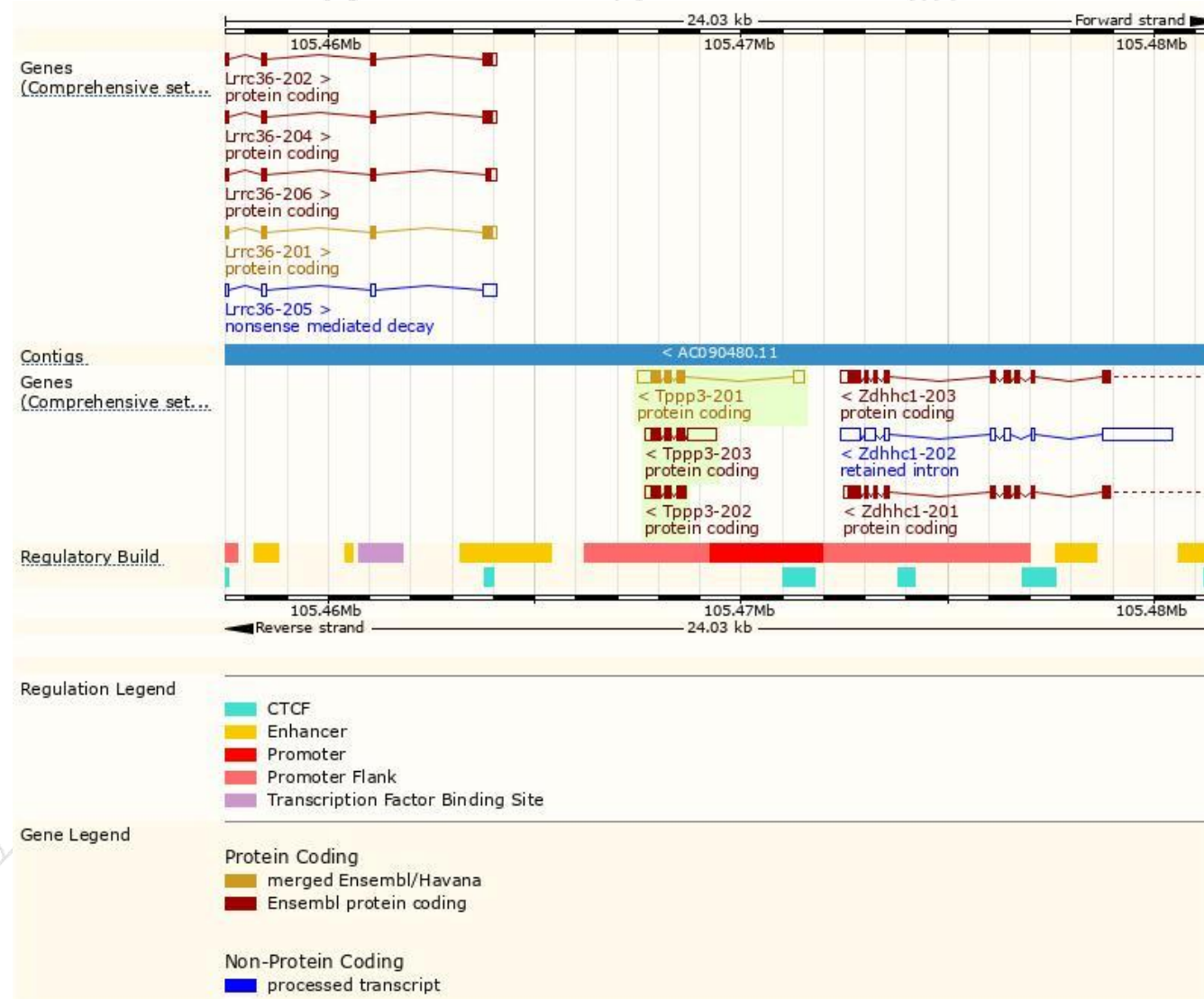
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Tppp3-203	ENSMUST00000177126.7	1396	176aa	Protein coding	CCDS22602	Q9CRB6	TSL:3 GENCODE basic APPRIS P1
Tppp3-201	ENSMUST00000014990.12	1127	176aa	Protein coding	CCDS22602	Q9CRB6	TSL:1 GENCODE basic APPRIS P1
Tppp3-202	ENSMUST00000176419.1	719	176aa	Protein coding	CCDS22602	Q9CRB6	TSL:1 GENCODE basic APPRIS P1

The strategy is based on the design of *Tppp3-202* 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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