

Trip4 Cas9-KO Strategy

Designer:

Huan Fan

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Project Overview

Project Name

Trip4

Project type

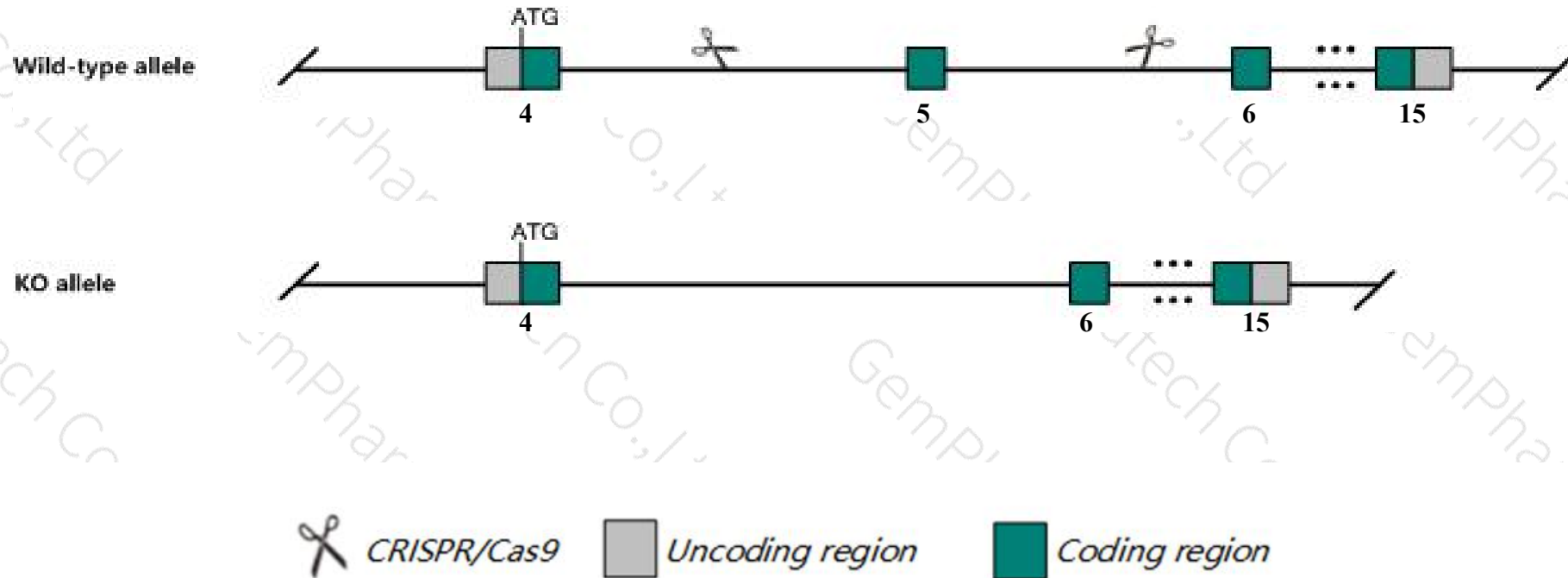
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Trip4* gene. The schematic diagram is as follows:



- The *Trip4* gene has 10 transcripts. According to the structure of *Trip4* gene, exon5 of *Trip4-210* (ENSMUST00000179395.7) transcript is recommended as the knockout region. The region contains 170bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Trip4* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Trip4* gene is located on the Chr9. 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)

Trip4 thyroid hormone receptor interactor 4 [Mus musculus (house mouse)]

Gene ID: 56404, updated on 31-Jan-2019

Summary



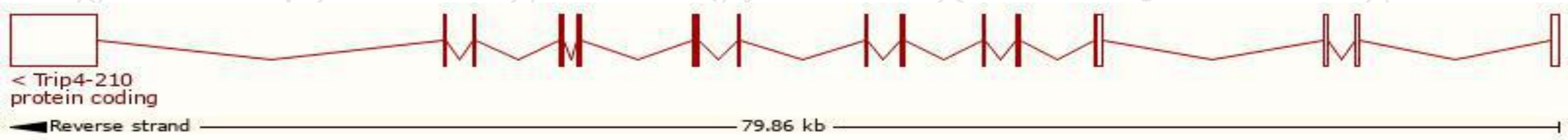
Official Symbol	Trip4 provided by MGI
Official Full Name	thyroid hormone receptor interactor 4 provided by MGI
Primary source	MGI:MGI:1928469
See related	Ensembl:ENSMUSG00000032386
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	4930558E03Rik, ASC-1, Asc1, BB191711
Expression	Ubiquitous expression in bladder adult (RPKM 5.1), testis adult (RPKM 4.6) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

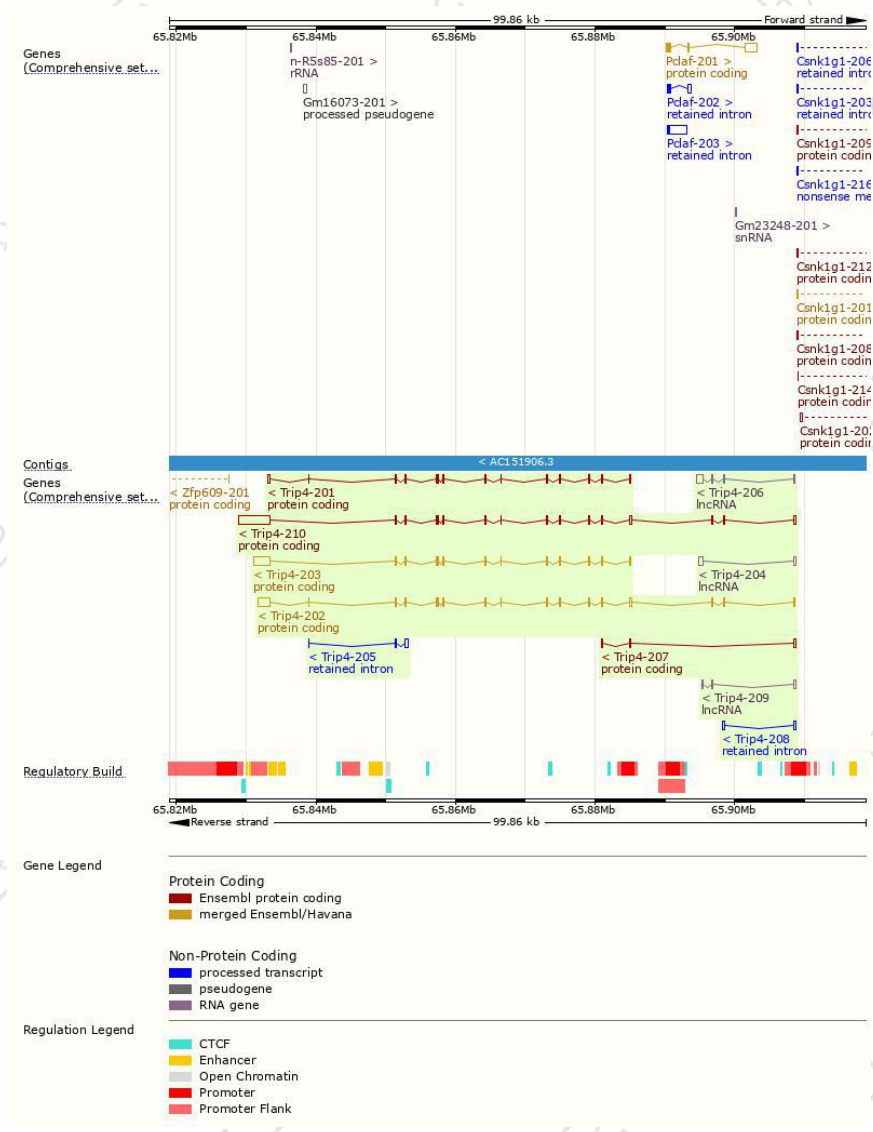
The gene has 10 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Trip4-210	ENSMUST00000179395.7	7055	539aa	Protein coding	CCDS52838	Q9QXN3	TSL:5 GENCODE basic
Trip4-202	ENSMUST00000119245.7	4211	581aa	Protein coding	CCDS23298	Q9QXN3	TSL:1 GENCODE basic APPRIS P1
Trip4-203	ENSMUST00000122410.7	3915	539aa	Protein coding	CCDS52838	Q9QXN3	TSL:1 GENCODE basic
Trip4-201	ENSMUST00000117083.1	1999	581aa	Protein coding	CCDS23298	Q9QXN3	TSL:1 GENCODE basic APPRIS P1
Trip4-207	ENSMUST00000134338.7	661	56aa	Protein coding	-	D3Z3P3	CDS 3' incomplete TSL:5
Trip4-206	ENSMUST00000133747.7	1564	No protein	Processed transcript	-	-	TSL:1
Trip4-204	ENSMUST00000126517.7	907	No protein	Processed transcript	-	-	TSL:1
Trip4-209	ENSMUST00000143864.1	683	No protein	Processed transcript	-	-	TSL:2
Trip4-208	ENSMUST00000139346.1	576	No protein	Retained intron	-	-	TSL:1
Trip4-205	ENSMUST00000132380.1	508	No protein	Retained intron	-	-	TSL:3

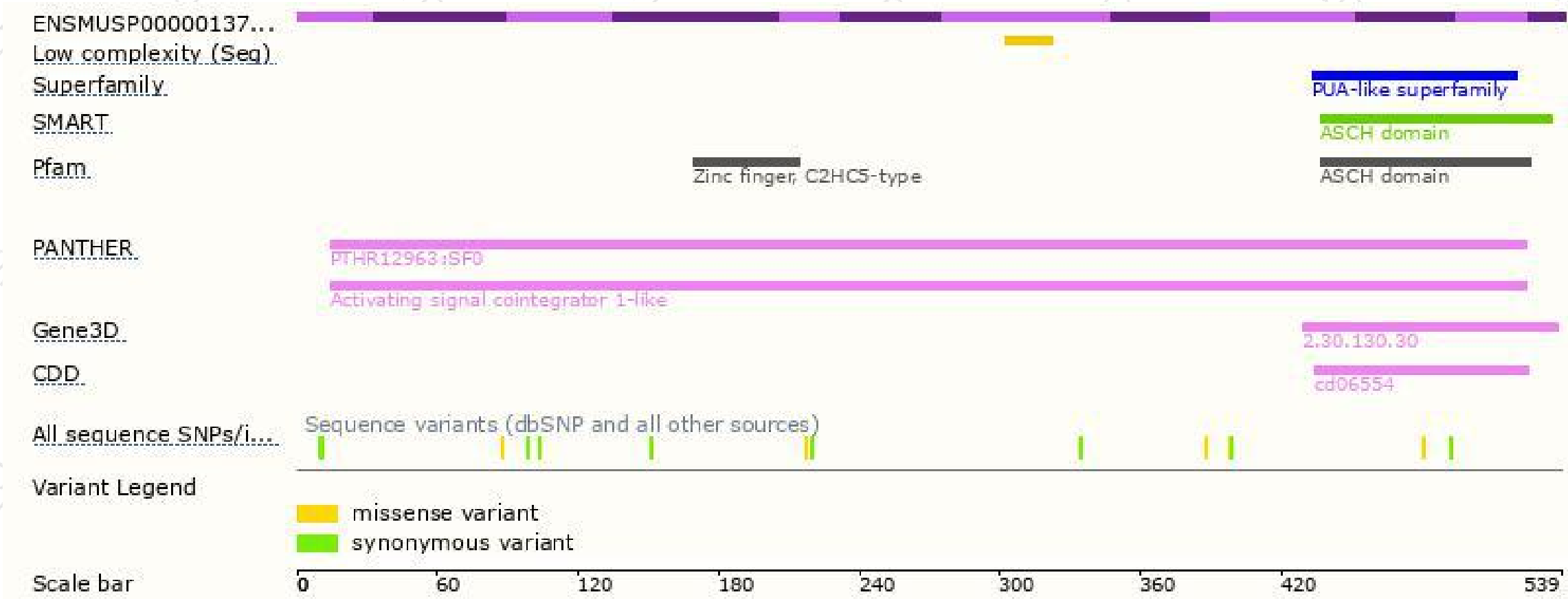
The strategy is based on the design of *Trip4-210* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

