

Tekt1 Cas9-KO Strategy

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Project Overview

Project Name

Tekt1

Project type

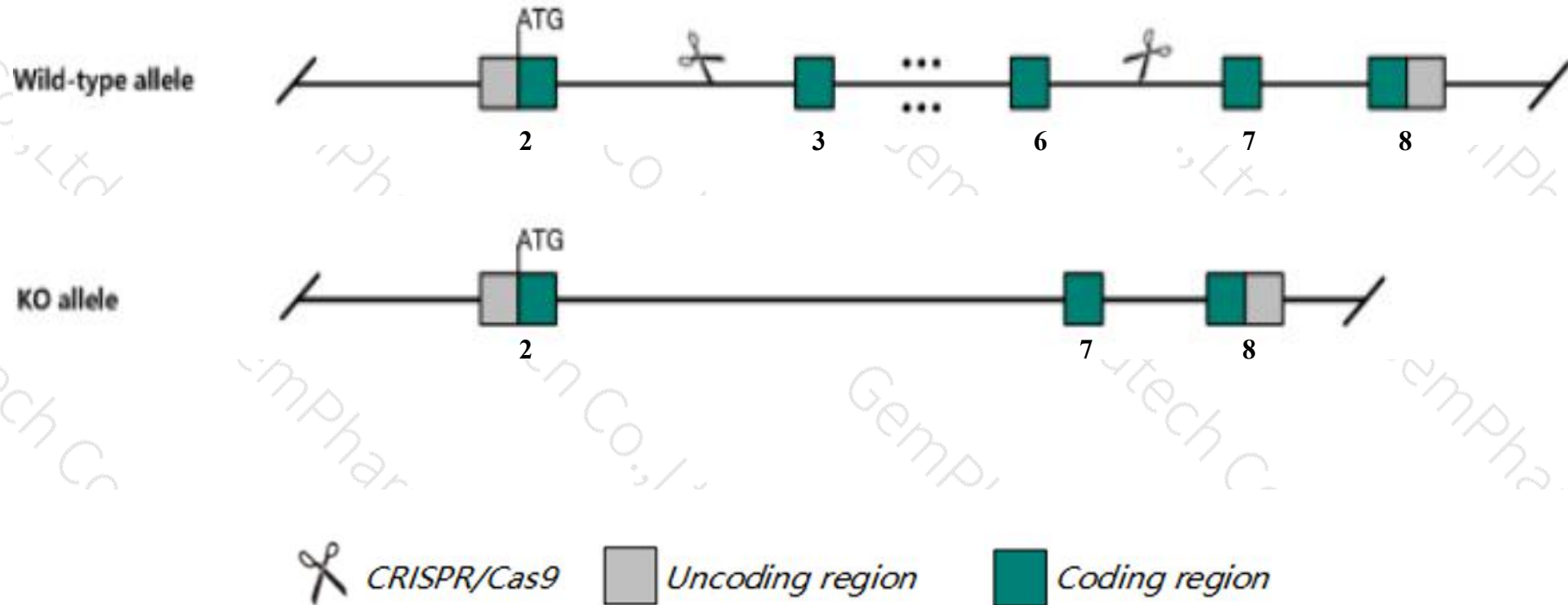
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Tekt1* gene. The schematic diagram is as follows:



- The *Tekt1* gene has 3 transcripts. According to the structure of *Tekt1* gene, exon3-exon6 of *Tekt1-201* (ENSMUST00000021155.3) transcript is recommended as the knockout region. The region contains 662bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Tekt1* gene. The brief process is as follows: CRISPR/Cas9 system v

- The *Tekt1* gene is located on the Chr11. 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)

Tekt1 tektin 1 [Mus musculus (house mouse)]

Gene ID: 21689, updated on 31-Jan-2019

Summary



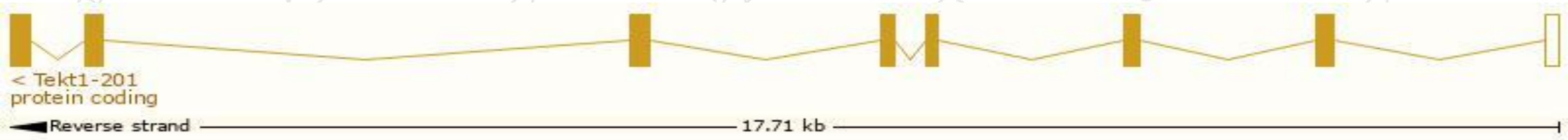
Official Symbol	Tekt1 provided by MGI
Official Full Name	tektin 1 provided by MGI
Primary source	MGI:MGI:1333819
See related	Ensembl:ENSMUSG00000020799
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	MT14
Expression	Biased expression in testis adult (RPKM 66.9) and lung adult (RPKM 2.4) See more
Orthologs	human all

Transcript information (Ensembl)

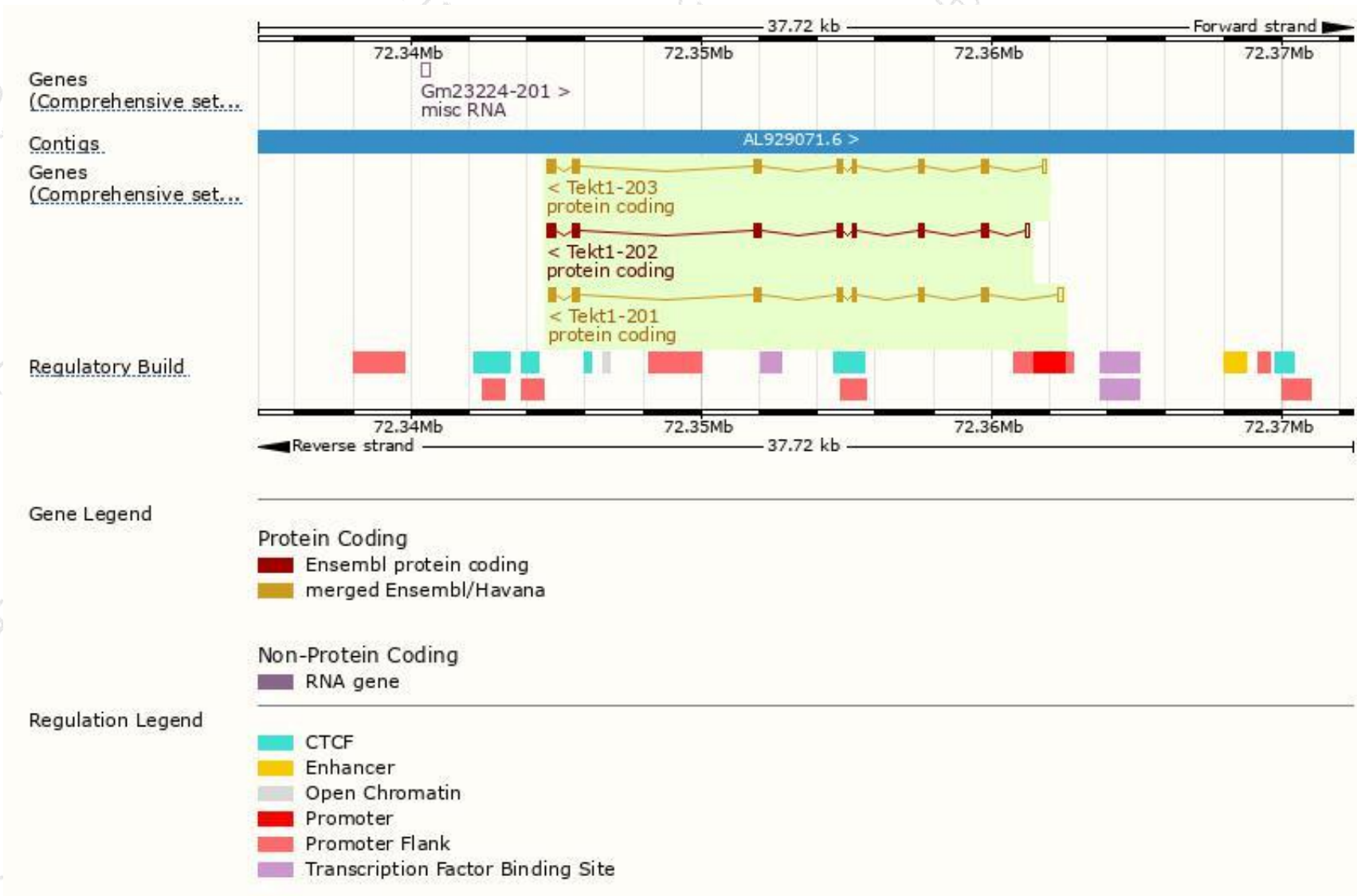
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Tekt1-201	ENSMUST00000021155.3	1447	418aa	Protein coding	CCDS36215	Q5NBU4 Q9DAJ2	TSL:1 GENCODE basic APPRIS P1
Tekt1-202	ENSMUST00000108502.7	1403	418aa	Protein coding	CCDS36215	Q5NBU4 Q9DAJ2	TSL:1 GENCODE basic APPRIS P1
Tekt1-203	ENSMUST00000108503.8	1397	418aa	Protein coding	CCDS36215	Q5NBU4 Q9DAJ2	TSL:1 GENCODE basic APPRIS P1

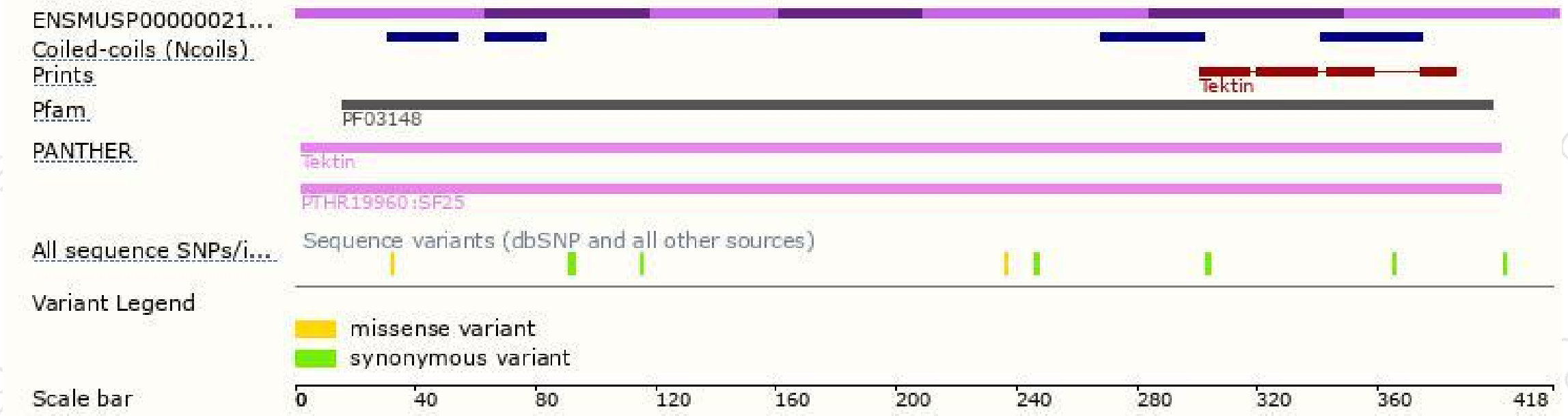
The strategy is based on the design of *Tekt1-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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