

***Taf12* Cas9-KO Strategy**

Designer: Xueting Zhang

Reviewer: Yanhua Shen

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Project Overview

Project Name

Taf12

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Taf12* gene. The schematic diagram is as follows:



- The *Taf12* gene has 3 transcripts. According to the structure of *Taf12* gene, exon3-exon4 of *Taf12-201* (ENSMUST00000030731.10) transcript is recommended as the knockout region. The region contains 193bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Taf12* gene. The brief process is as follows: CRISPR/Cas9 system

- Transcript *Taf12*-203 may not be affected.
- The *Taf12* gene is located on the Chr4. 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)

Taf12 TATA-box binding protein associated factor 12 [*Mus musculus* (house mouse)]

Gene ID: 66464, updated on 27-Feb-2020

Summary

- Official Symbol** Taf12 provided by [MGI](#)
- Official Full Name** TATA-box binding protein associated factor 12 provided by [MGI](#)
- Primary source** [MGI:MGI:1913714](#)
- See related** [Ensembl:ENSMUSG00000028899](#)
- 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** 20kDa; Taf2J; AW557038; 2810422D08Rik
- Expression** Ubiquitous expression in liver E14 (RPKM 16.3), liver E14.5 (RPKM 13.3) and 28 other tissues [See more](#)
- Orthologs** [human](#) [all](#)

Genomic context

Location: 4; 4 D2.3

See Taf12 in [Genome Data Viewer](#)

Exon count: 9

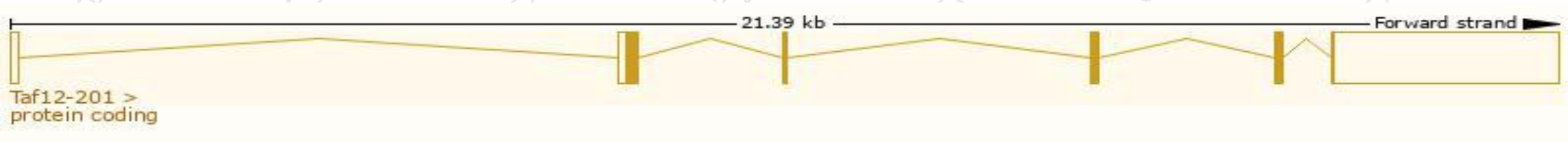
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	4	NC_000070.6 (132274355..132293329)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	4	NC_000070.5 (131830290..131849244)

Transcript information (Ensembl)

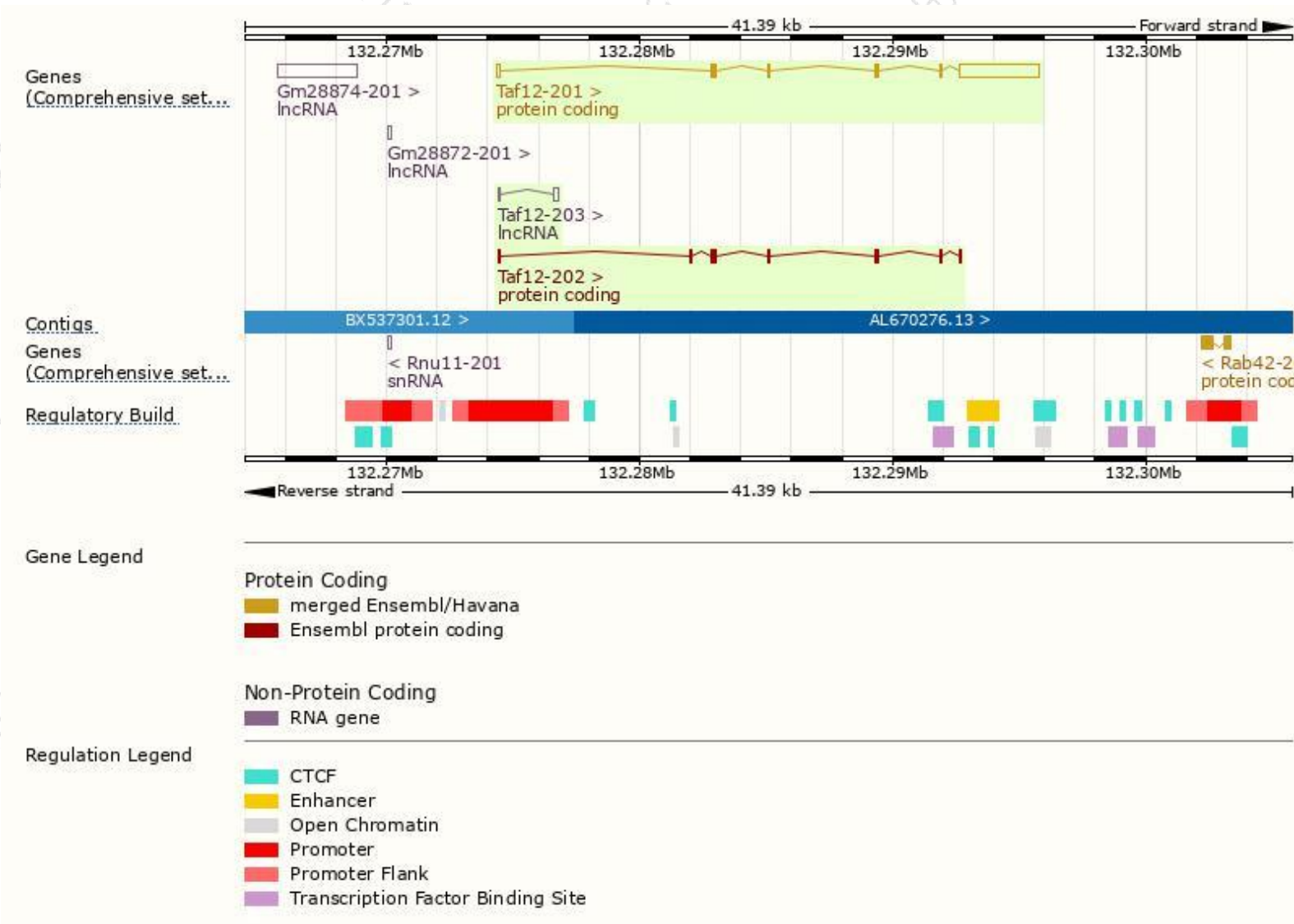
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Taf12-201	ENSMUST00000030731.10	3787	161aa	Protein coding	CCDS18721	Q8VE65	TSL:1 GENCODE basic APPRIS P2
Taf12-202	ENSMUST00000105963.1	777	213aa	Protein coding	-	E9QNT5	TSL:5 APPRIS ALT 1
Taf12-203	ENSMUST00000124365.1	241	No protein	lncRNA	-	-	TSL:3

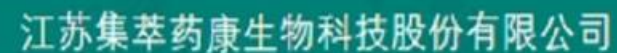
The strategy is based on the design of *Taf12-201* transcript,The transcription is shown below



Genomic location distribution



集萃药康
GemPharmatech



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

Tel: 400-9660890

