

Tnfsf18 Cas9-KO Strategy

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Reviewer:	
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Project Overview

Project Name

Tnfsf18

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Tnfsf18* gene. The schematic diagram is as follows:



- The *Tnfsf18* gene has 1 transcript. According to the structure of *Tnfsf18* gene, exon2 of *Tnfsf18-201* (ENSMUST00000086084.1) transcript is recommended as the knockout region. The region contains 34bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Tnfsf18* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Tnfsf18* gene is located on the Chr1. 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.

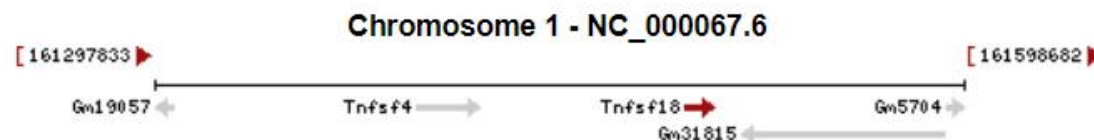
Gene information (NCBI)

Tnfsf18 tumor necrosis factor (ligand) superfamily, member 18 [*Mus musculus* (house mouse)]

Gene ID: 240873, updated on 12-Aug-2019

Summary

Official Symbol	Tnfsf18 provided by MGI
Official Full Name	tumor necrosis factor (ligand) superfamily, member 18 provided by MGI
Primary source	MGI:MGI:2673064
See related	Ensembl:ENSMUSG000000066755
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	Gitrl; Tnlg2a
Expression	Low expression observed in reference dataset See more
Orthologs	human all

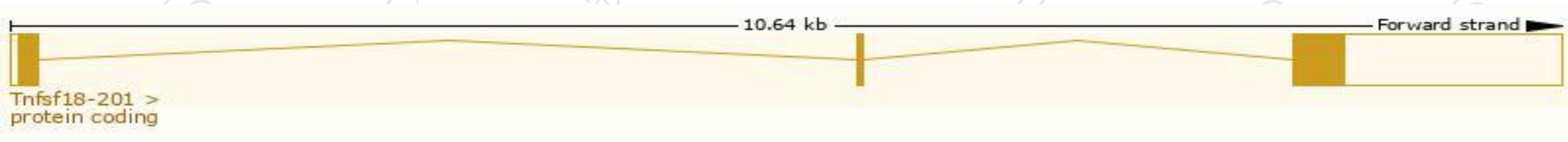


Transcript information (Ensembl)

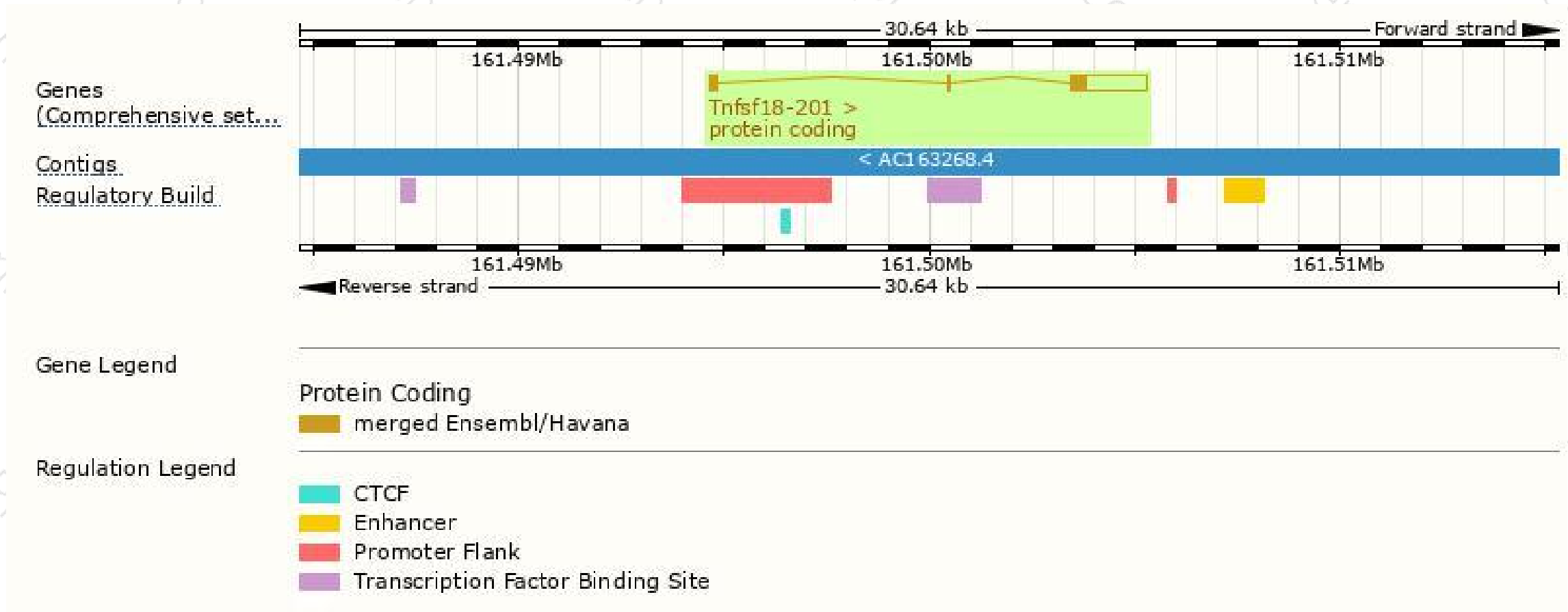
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Translation ID	Biotype	CCDS	UniProt	Flags
Tnfsf18-201	ENSMUST00000086084.1	2066	173aa	ENSMUSP00000083251.1	Protein coding	CCDS15417	Q7TS55	TSL:1 Gencode basic APPRIS P1

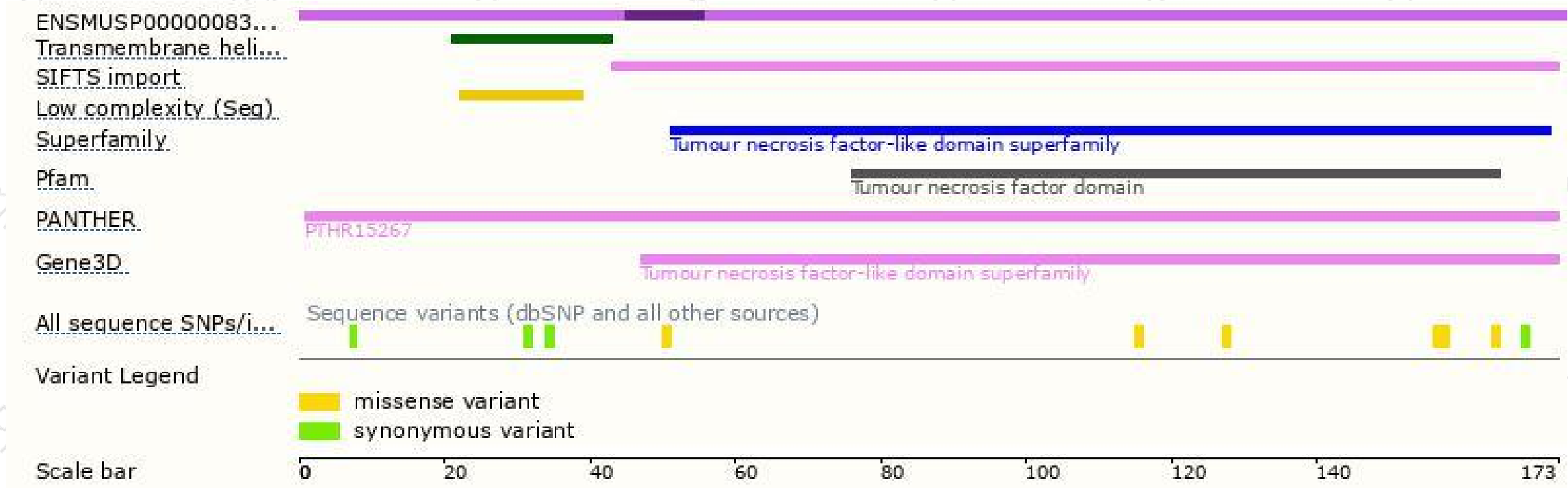
The strategy is based on the design of *Tnfsf18-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

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