

Cstf1 Cas9-KO Strategy

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Reviewer:

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Project Overview

Project Name

Cstf1

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

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



- The *Cstfl* gene has 2 transcripts. According to the structure of *Cstfl* gene, exon3-exon5 of *Cstfl*-201 (ENSMUST00000116375.1) transcript is recommended as the knockout region. The region contains most 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 *Cstfl* gene. The brief process is as follows: CRISPR/Cas9 system v

- The *Cstfl* gene is located on the Chr2. 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)

Cstf1 cleavage stimulation factor, 3' pre-RNA, subunit 1 [Mus musculus (house mouse)]

Gene ID: 67337, updated on 19-Feb-2019

Summary



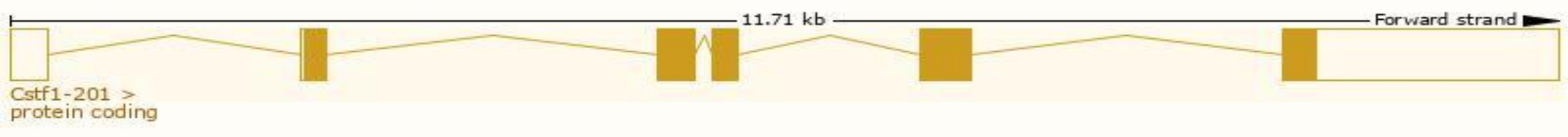
Official Symbol	Cstf1 provided by MGI
Official Full Name	cleavage stimulation factor, 3' pre-RNA, subunit 1 provided by MGI
Primary source	MGI:MGI:1914587
See related	Ensembl:ENSMUSG000000027498
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	1700057K18Rik, AI788832
Expression	Ubiquitous expression in testis adult (RPKM 41.6), thymus adult (RPKM 23.7) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

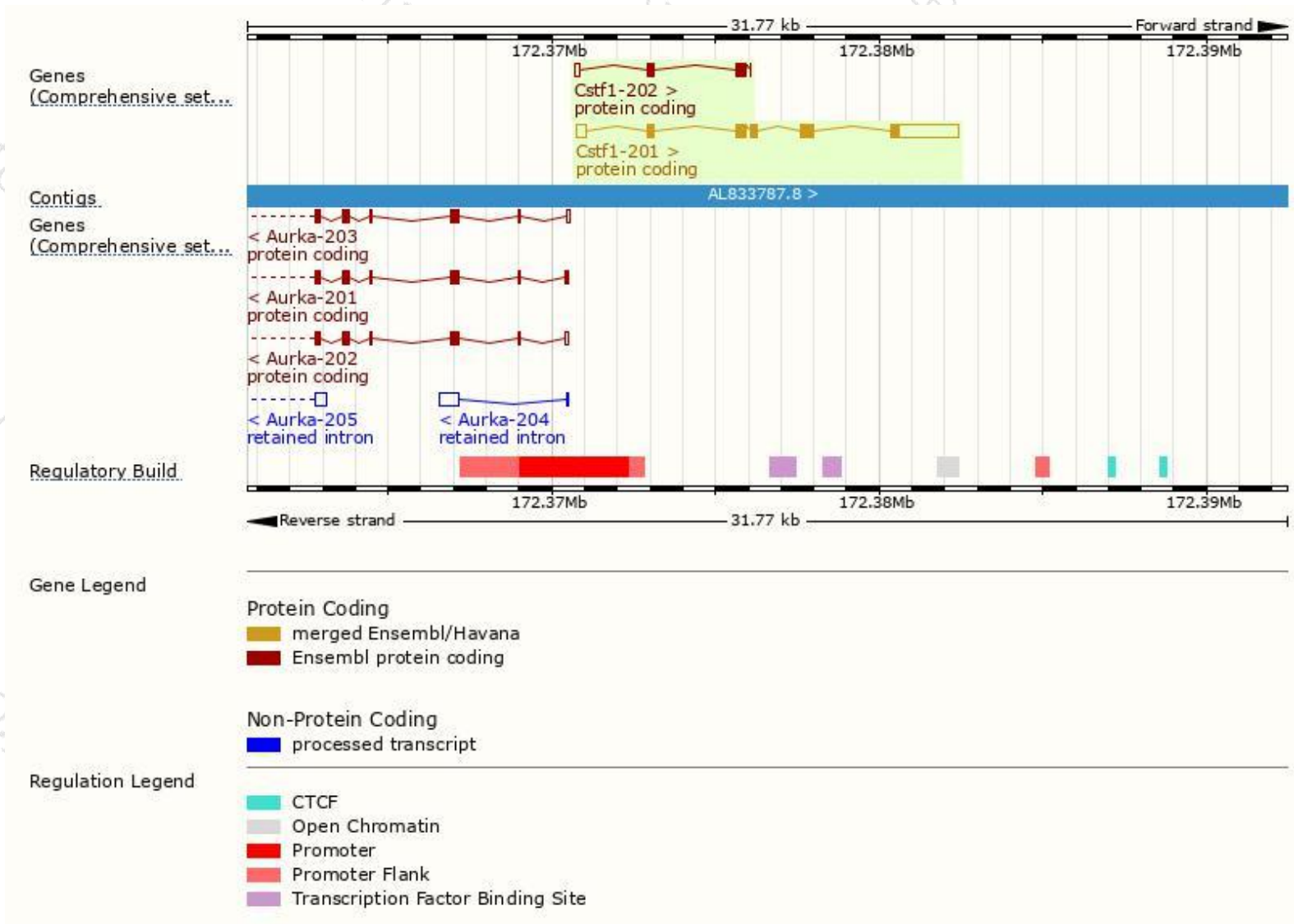
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Cstf1-201	ENSMUST00000116375.1	3451	431aa	Protein coding	CCDS17130	Q99LC2	TSL:1 GENCODE basic APPRIS P1
Cstf1-202	ENSMUST00000151511.7	674	155aa	Protein coding	-	A2APA3	CDS 3' incomplete TSL:2

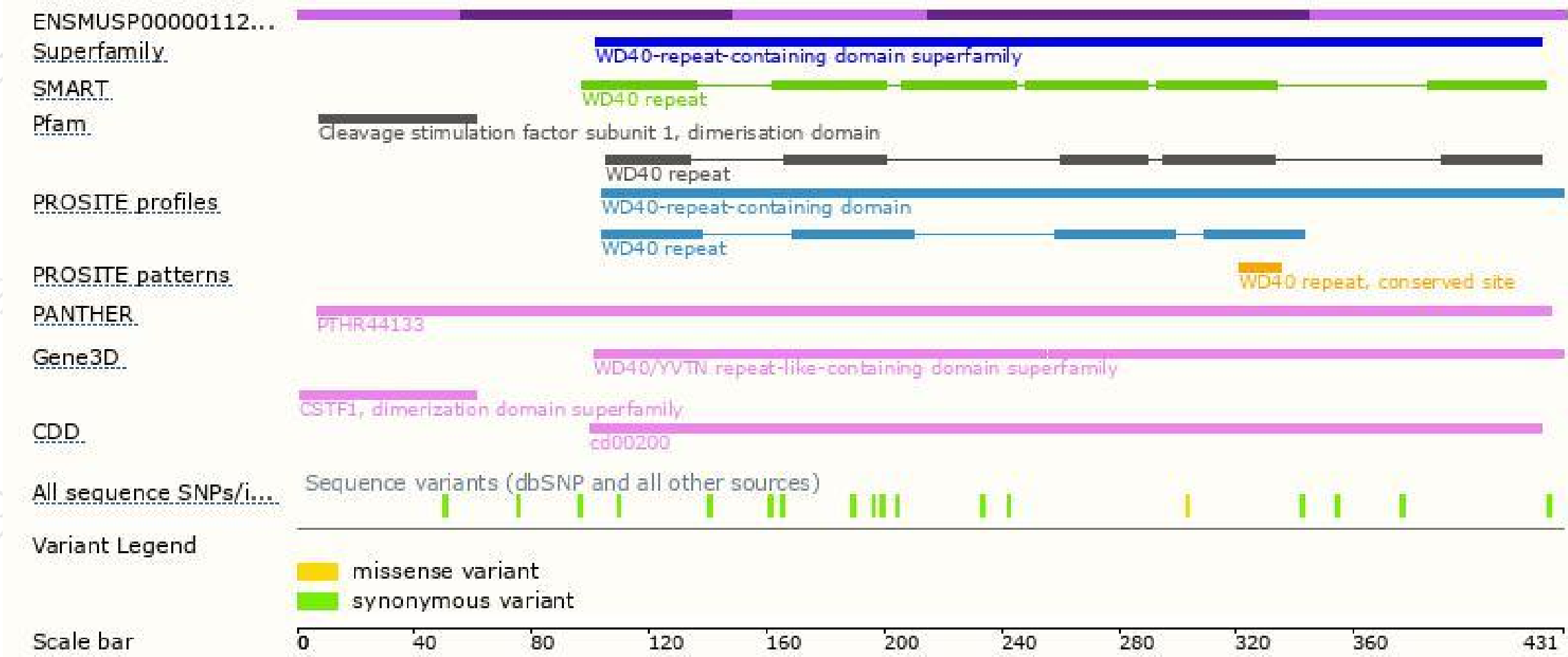
The strategy is based on the design of *Cstf1-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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