

Celf5 Cas9-KO Strategy

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Project Overview

Project Name

Celf5

Project type

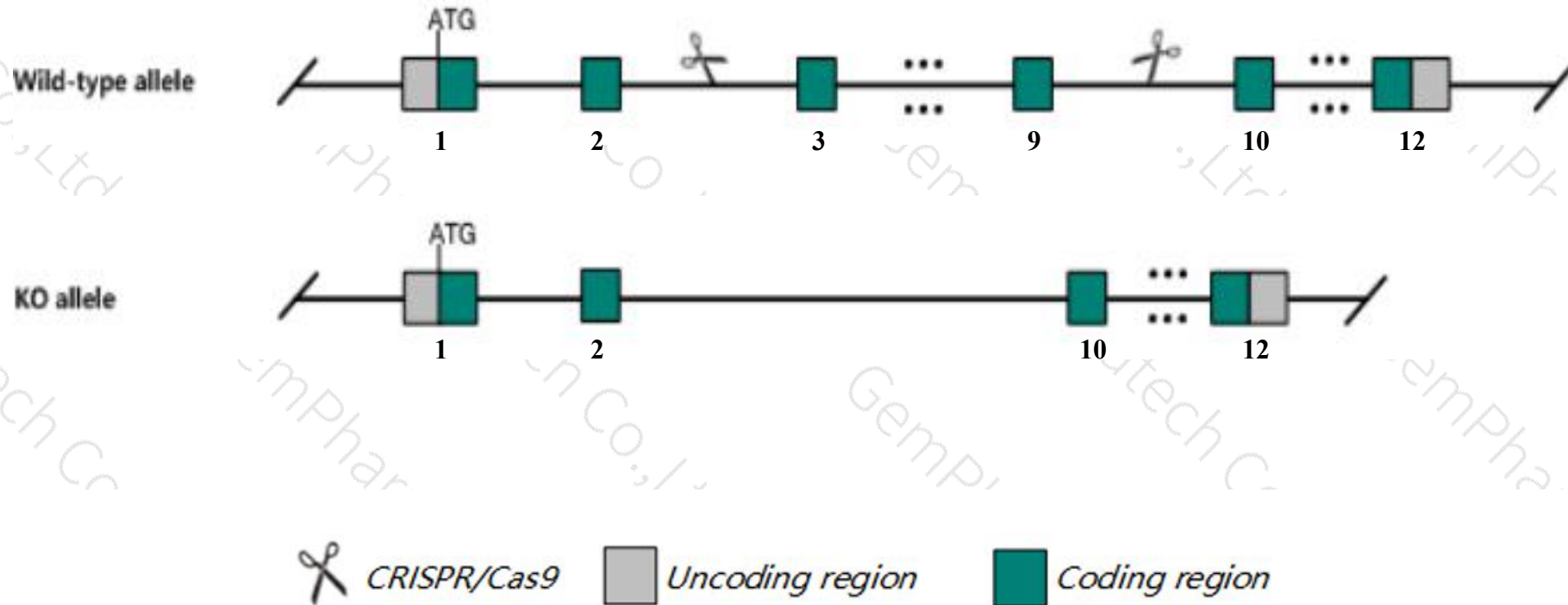
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Celf5* gene. The schematic diagram is as follows:



- The *Celf5* gene has 9 transcripts. According to the structure of *Celf5* gene, exon3-exon9 of *Celf5*-201(ENSMUST00000118763.7) transcript is recommended as the knockout region. The region contains 760bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Celf5* gene. The brief process is as follows: CRISPR/Cas9 system were microinjected into the fertilized eggs of C57BL/6JGpt mice. Fertilized eggs were transplanted to obtain positive F0 mice which were confirmed by PCR and sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6JGpt mice.

- The *Celf5* gene is located on the Chr10. 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.
- Transcript 208 CDS 3' incomplete the influences is unknown.
- 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.

Celf5 CUGBP, Elav-like family member 5 [Mus musculus (house mouse)]

Gene ID: 319586, updated on 26-Mar-2020

Summary



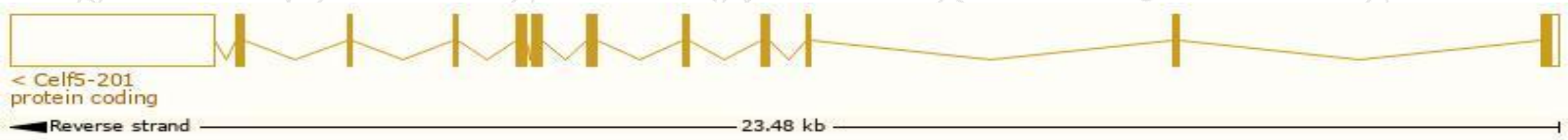
Official Symbol	Celf5 provided by MGI
Official Full Name	CUGBP, Elav-like family member 5 provided by MGI
Primary source	MGI:MGI:2442333
See related	Ensembl:ENSMUSG00000034818
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	4930565A21Rik, Brunol5
Expression	Biased expression in CNS E18 (RPKM 40.2), whole brain E14.5 (RPKM 38.4) and 7 other tissues See more
Orthologs	human all

Transcript information Ensembl

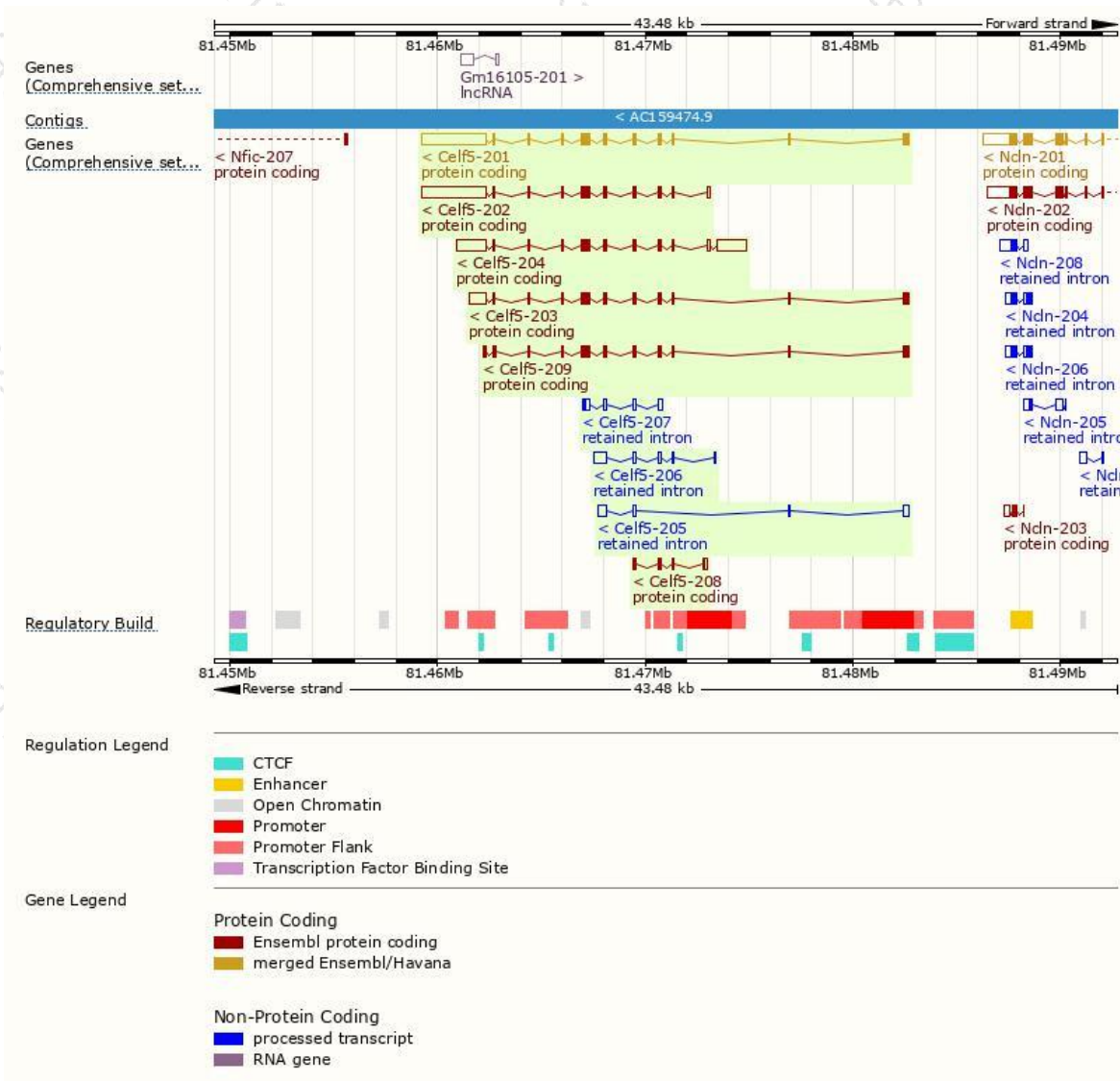
The gene has 9 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Celf5-201	ENSMUST00000118763.7	4391	395aa	Protein coding	CCDS48644	D3Z4T1	TSL:1 GENCODE basic
Celf5-202	ENSMUST00000119060.7	4166	319aa	Protein coding	CCDS78867	D3Z588	TSL:1 GENCODE basic
Celf5-204	ENSMUST00000120856.7	3861	318aa	Protein coding	CCDS78868	D3Z4C5	TSL:1 GENCODE basic
Celf5-203	ENSMUST00000120508.7	2042	394aa	Protein coding	CCDS78869	D3Z580	TSL:1 GENCODE basic
Celf5-209	ENSMUST00000238823.1	1477	446aa	Protein coding	-	-	GENCODE basic APPRIS P1
Celf5-208	ENSMUST00000147524.2	442	92aa	Protein coding	-	D3Z4K9	CDS 3' incomplete TSL:3
Celf5-206	ENSMUST00000141207.7	945	No protein	Retained intron	-	-	TSL:1
Celf5-205	ENSMUST00000128494.1	748	No protein	Retained intron	-	-	TSL:3
Celf5-207	ENSMUST00000145375.7	605	No protein	Retained intron	-	-	TSL:3

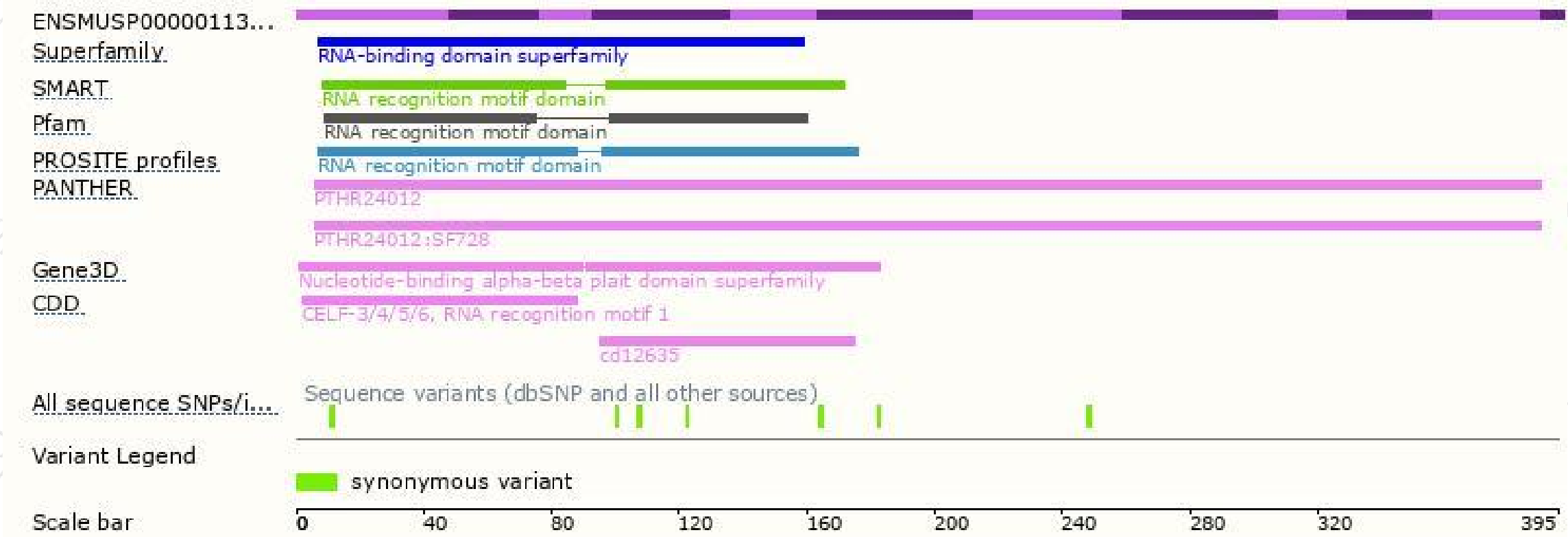
The strategy is based on the design of *Celf5-201* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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

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