

Sh3rf2 Cas9-KO Strategy

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Project Overview



Project Name

Sh3rf2

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Sh3rf2* gene. The schematic diagram is as follows:



- The *Sh3rf2* gene has 6 transcripts. According to the structure of *Sh3rf2* gene, exon2-exon5 of *Sh3rf2-201* (ENSMUST00000072008.10) transcript is recommended as the knockout region. The region contains 779bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Sh3rf2* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Sh3rf2* gene is located on the Chr18. 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)

Sh3rf2 SH3 domain containing ring finger 2 [Mus musculus (house mouse)]

Gene ID: 269016, updated on 5-Mar-2019

Summary



Official Symbol	Sh3rf2 provided by MGI
Official Full Name	SH3 domain containing ring finger 2 provided by MGI
Primary source	MGI:MGI:2444628
See related	Ensembl:ENSMUSG00000057719
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	2310046K19, 9130023G24Rik, AI452083, Ppp1r39, RNF158
Expression	Biased expression in testis adult (RPKM 39.6), lung adult (RPKM 3.7) and 1 other tissue See more
Orthologs	human all

Transcript information (Ensembl)

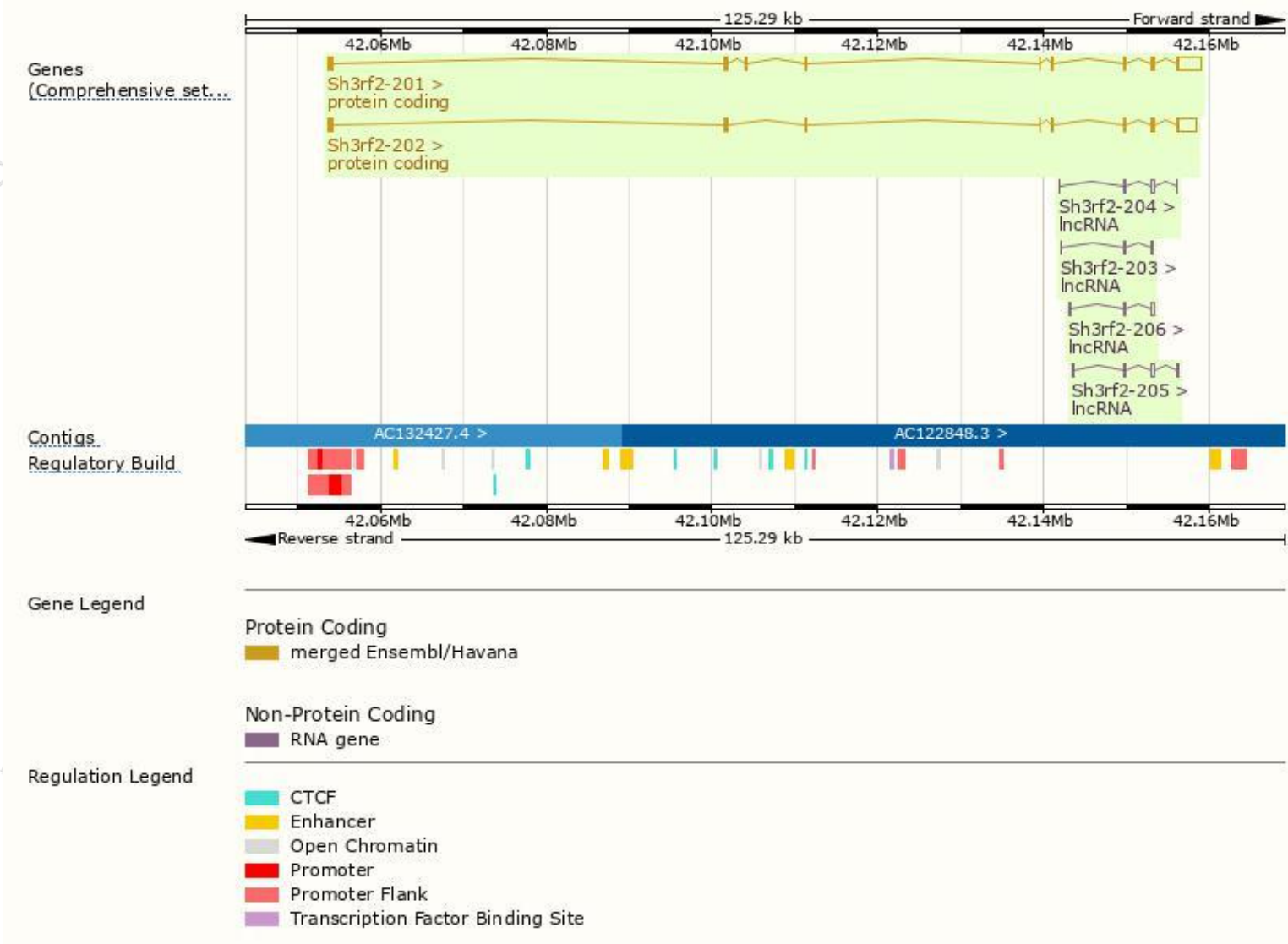
The gene has 6 transcripts, all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Sh3rf2-201	ENSMUST00000072008.10	5092	735aa	Protein coding	CCDS50265	Q8BZT2	TSL:1 GENCODE basic APPRIS P1
Sh3rf2-202	ENSMUST00000074679.3	4444	703aa	Protein coding	CCDS29210	Q8BZT2	TSL:1 GENCODE basic
Sh3rf2-205	ENSMUST00000236947.1	1143	No protein	lncRNA	-	-	
Sh3rf2-204	ENSMUST00000132681.7	836	No protein	lncRNA	-	-	TSL:2
Sh3rf2-206	ENSMUST00000237344.1	686	No protein	lncRNA	-	-	
Sh3rf2-203	ENSMUST00000128066.1	527	No protein	lncRNA	-	-	TSL:3

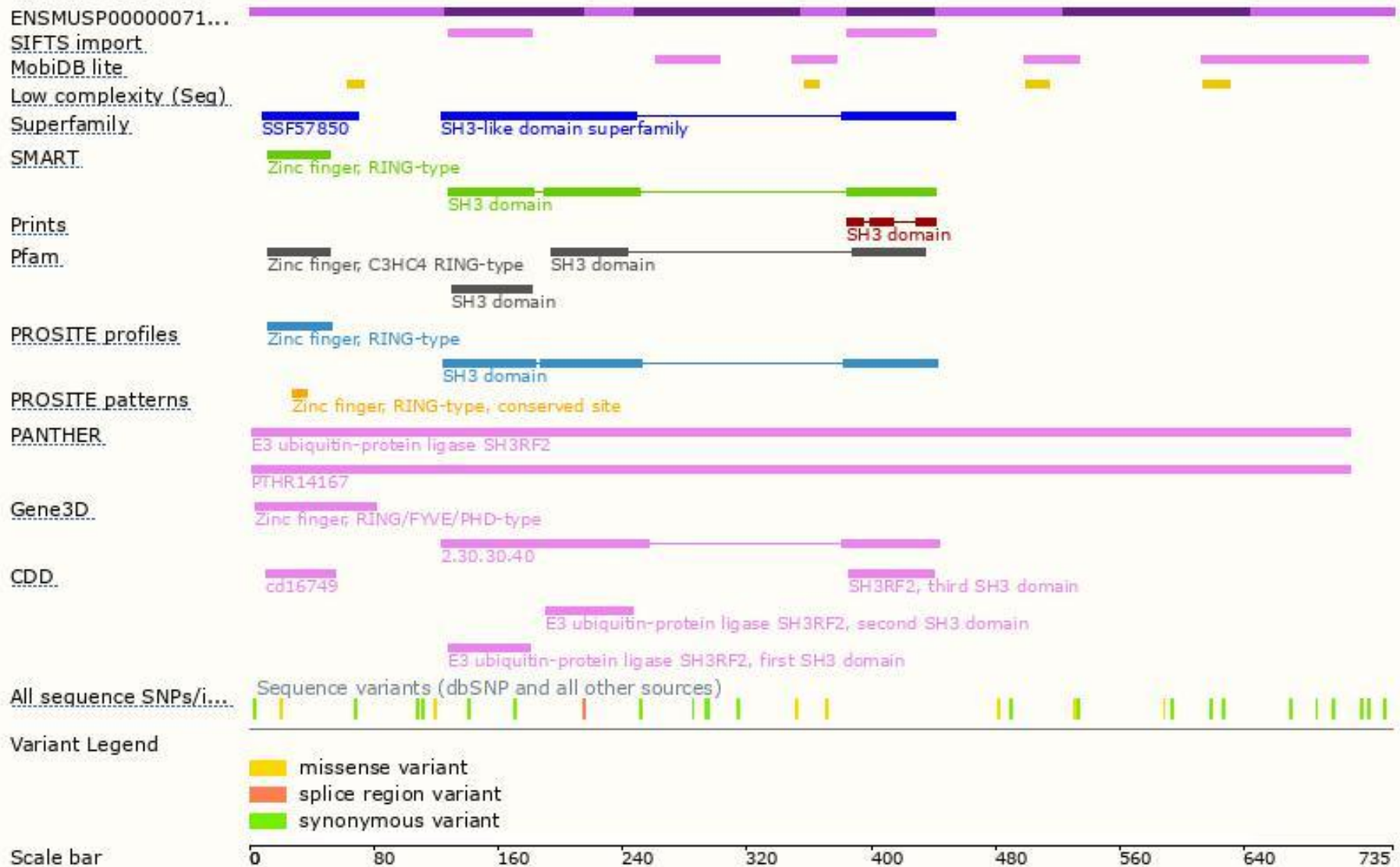
The strategy is based on the design of *Sh3rf2-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

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