

Crisp2 Cas9-KO Strategy

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Project Overview

Project Name

Crisp2

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Crisp2* gene. The schematic diagram is as follows:



- The *Crisp2* gene has 8 transcripts. According to the structure of *Crisp2* gene, exon6-exon9 of *Crisp2-206* (ENSMUST00000232709.1) transcript is recommended as the knockout region. The region contains 446bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Crisp2* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Crisp2* gene is located on the Chr17. 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)

Crisp2 cysteine-rich secretory protein 2 [Mus musculus (house mouse)]

Gene ID: 22024, updated on 31-Jan-2019

Summary

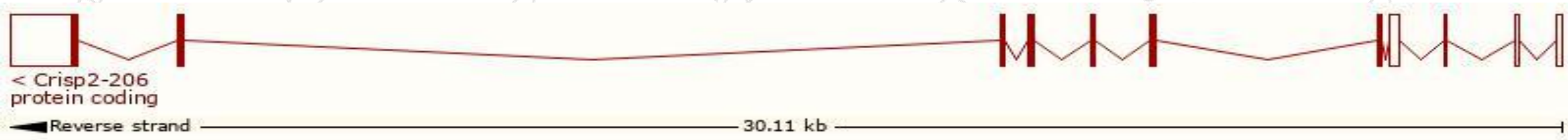
Official Symbol	Crisp2 provided by MGI
Official Full Name	cysteine-rich secretory protein 2 provided by MGI
Primary source	MGI:MGI:98815
See related	Ensembl:ENSMUSG00000023930
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	CRISP-2, GAPDL5, Tpx-1, Tpx1
Expression	Restricted expression toward testis adult (RPKM 326.9) See more
Orthologs	human all

Transcript information (Ensembl)

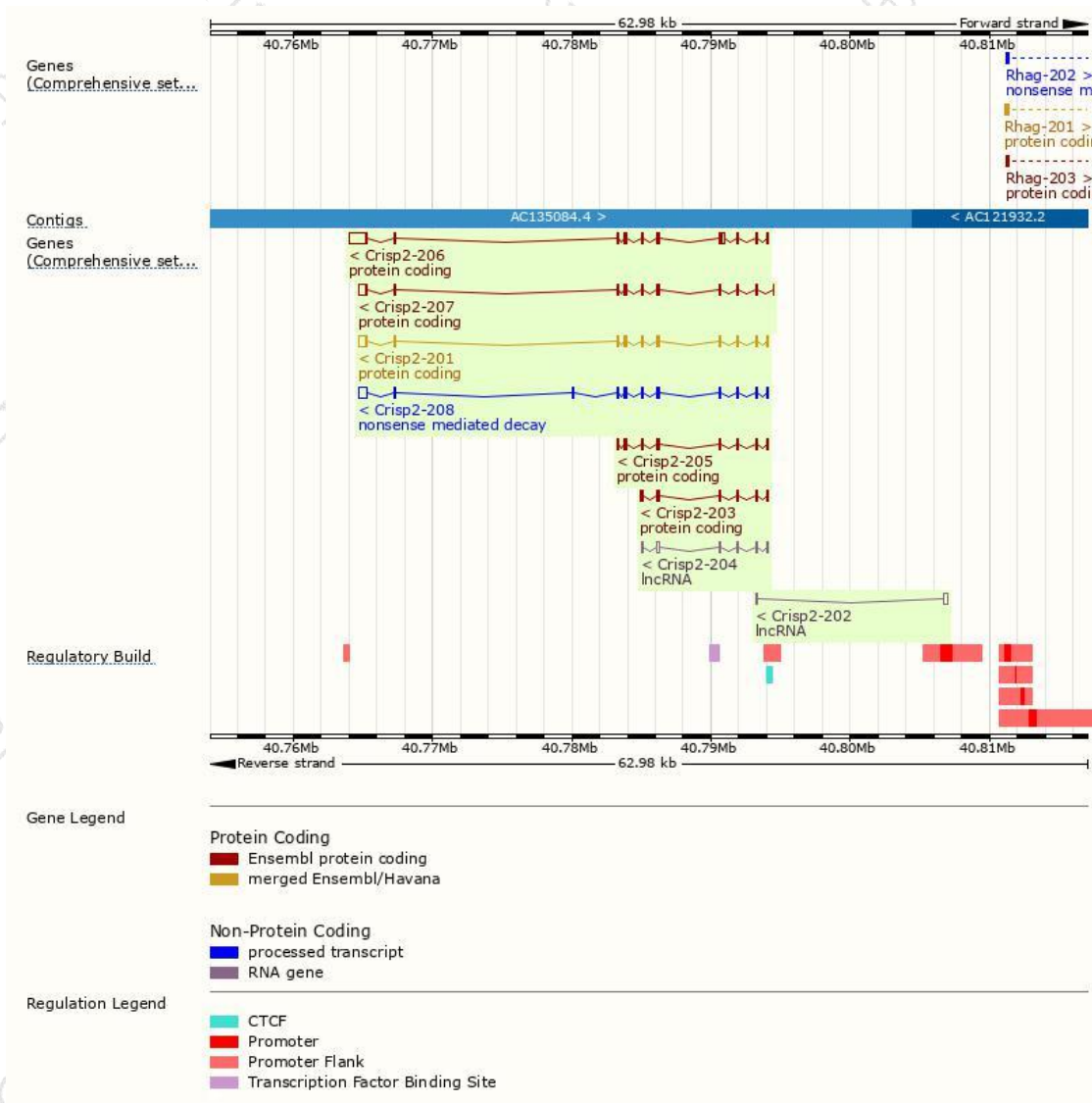
The gene has 8 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Crisp2-206	ENSMUST00000232709.1	2341	243aa	Protein coding	CCDS28786	P16563	GENCODE basic APPRIS P1
Crisp2-201	ENSMUST0000024724.13	1438	243aa	Protein coding	CCDS28786	P16563	TSL:1 GENCODE basic APPRIS P1
Crisp2-207	ENSMUST00000233529.1	1379	243aa	Protein coding	CCDS28786	P16563	GENCODE basic APPRIS P1
Crisp2-205	ENSMUST00000144243.7	758	171aa	Protein coding	-	D3YVR2	CDS 3' incomplete TSL:3
Crisp2-203	ENSMUST00000131699.7	538	100aa	Protein coding	-	Q9D2T2	TSL:1 GENCODE basic
Crisp2-208	ENSMUST00000233679.1	1506	172aa	Nonsense mediated decay	-	A0A3B2W3E6	
Crisp2-204	ENSMUST00000141204.1	449	No protein	lncRNA	-	-	TSL:3
Crisp2-202	ENSMUST00000124399.1	334	No protein	lncRNA	-	-	TSL:2

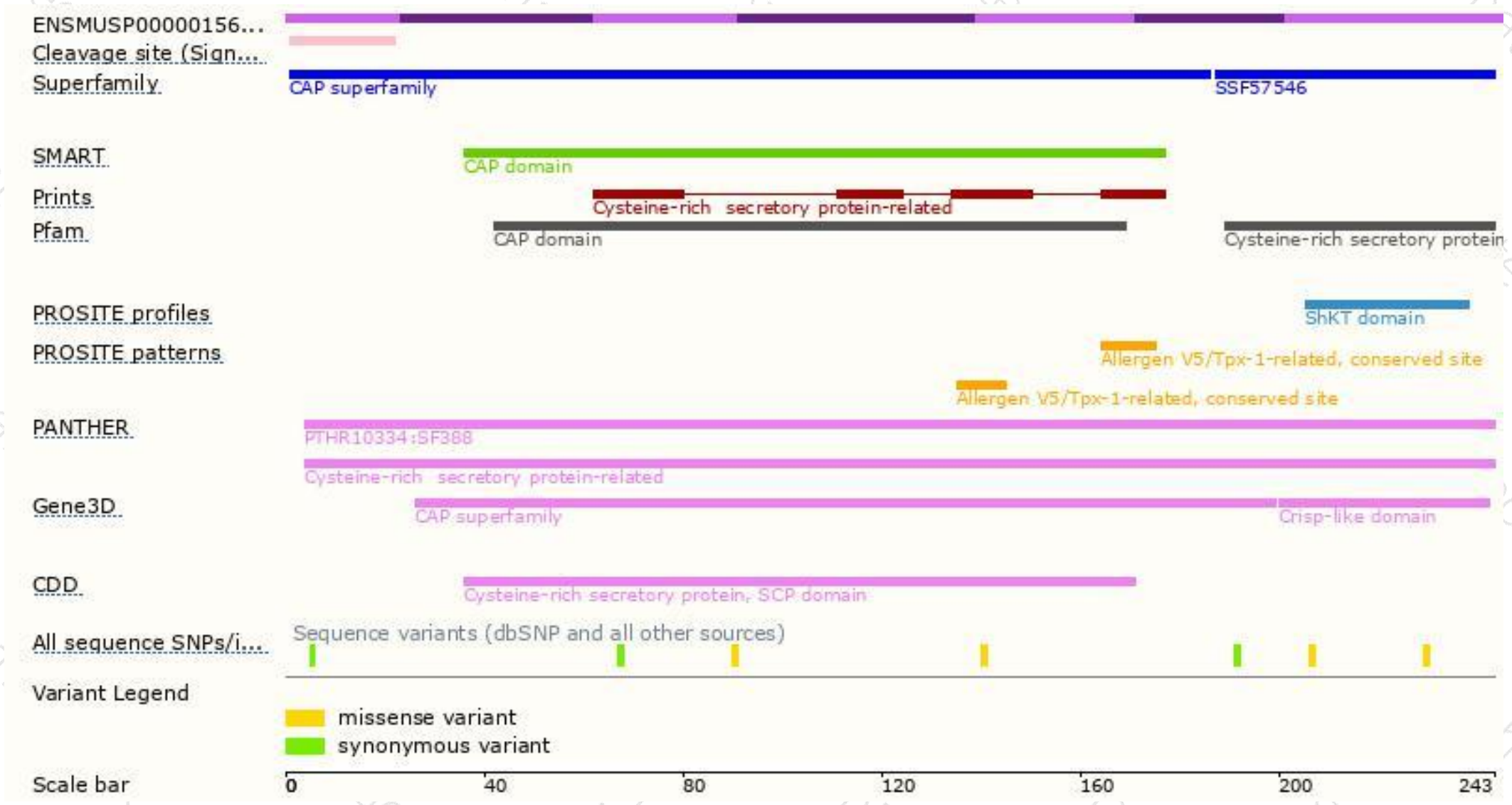
The strategy is based on the design of *Crisp2-206* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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