

Izumo2 Cas9-KO Strategy

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Project Overview

Project Name

Izumo2

Project type

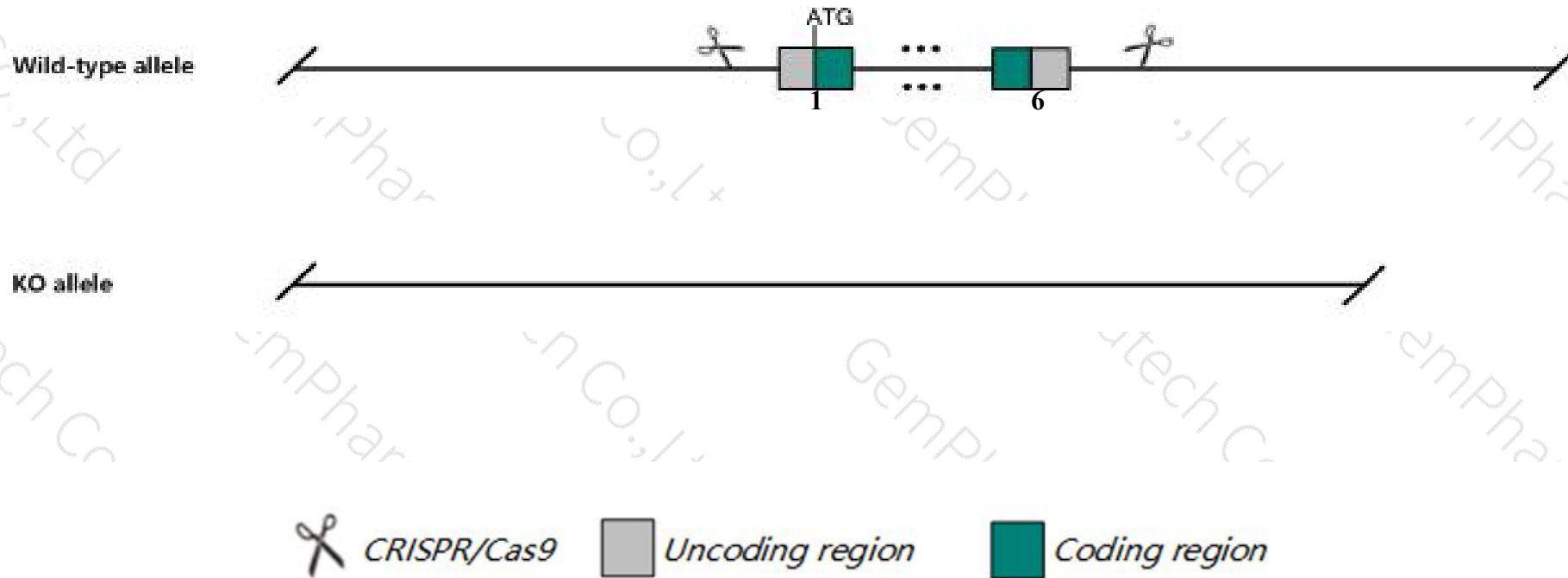
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Izumo2* gene. The schematic diagram is as follows:



- The *Izumo2* gene has 3 transcripts. According to the structure of *Izumo2* gene, exon1-exon6 of *Izumo2-201* (ENSMUST00000085422.3) transcript is recommended as the knockout region. The region contains all 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 *Izumo2* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Izumo2* gene is located on the Chr7. 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)

Izumo2 IZUMO family member 2 [*Mus musculus* (house mouse)]

Gene ID: 75510, updated on 14-Aug-2019

Summary



Official Symbol	Izumo2 provided by MGI
Official Full Name	IZUMO family member 2 provided by MGI
Primary source	MGI:MGI:1922760
See related	Ensembl:ENSMUSG00000066500
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	1700023D19Rik
Expression	Restricted expression toward testis adult (RPKM 47.8) See more
Orthologs	human all

Genomic context



Location: 7; 7 B3

Exon count: 7

See Izumo2 in [Genome Data Viewer](#)

Transcript information (Ensembl)

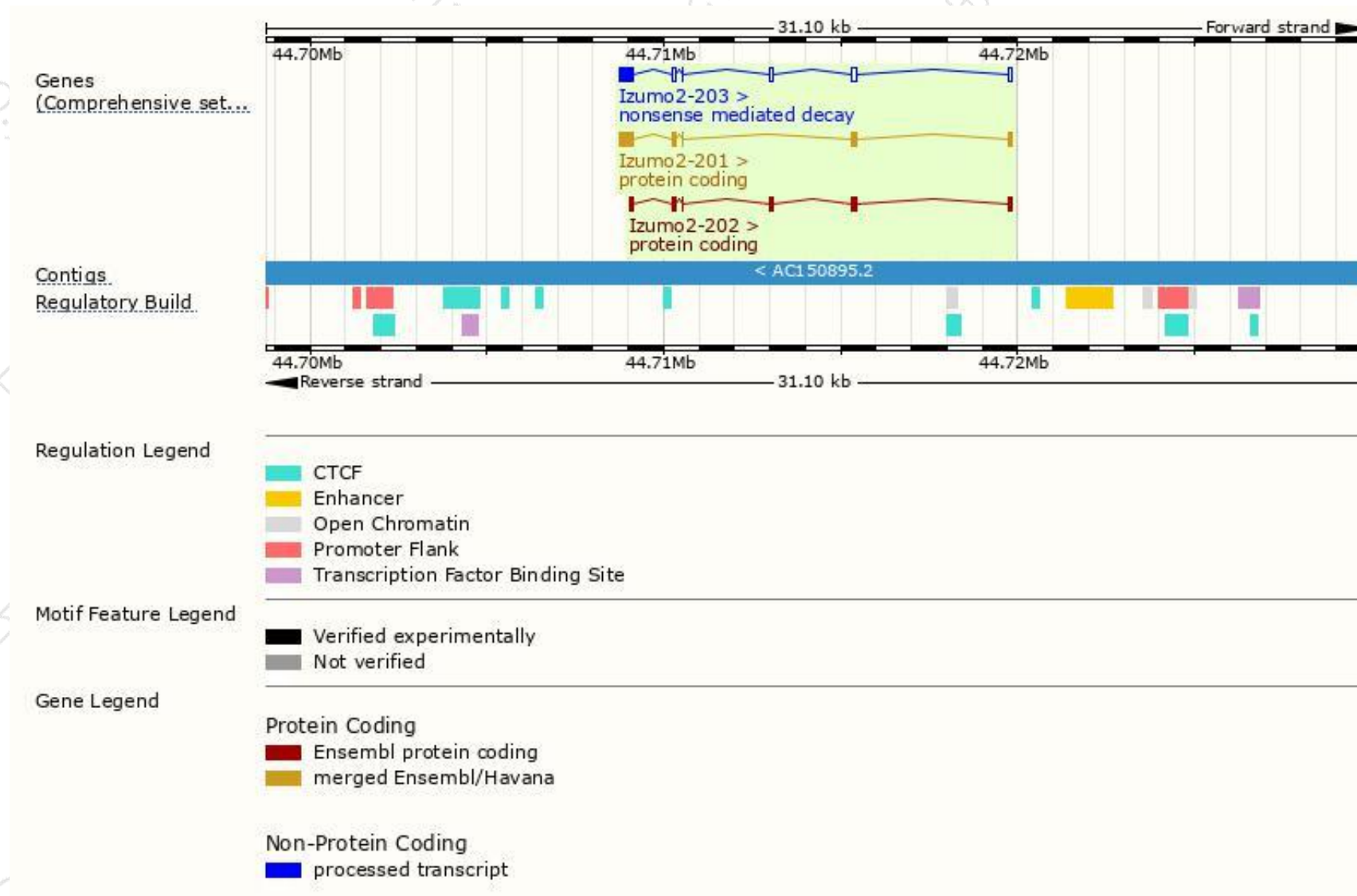
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Izumo2-201	ENSMUST00000085422.3	632	193aa	Protein coding	CCDS52235	Q9DA16	TSL:1 GENCODE basic APPRIS P1
Izumo2-202	ENSMUST00000207182.1	490	143aa	Protein coding	-	A0A140LIW5	CDS 5' incomplete TSL:3
Izumo2-203	ENSMUST00000209004.1	704	94aa	Nonsense mediated decay	-	A0A140LHM0	TSL:1

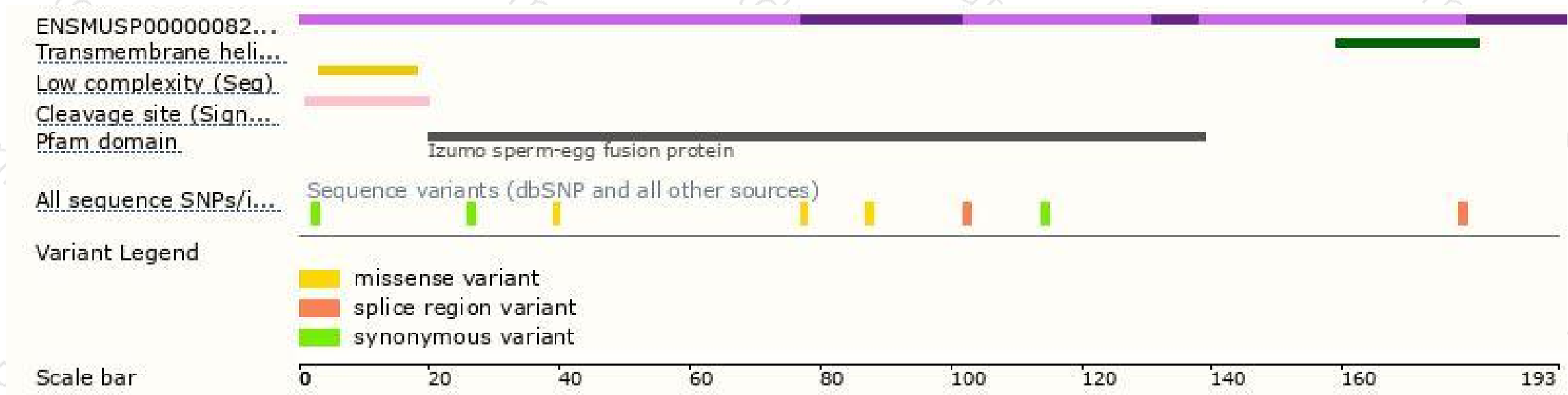
The strategy is based on the design of *Izumo2-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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