

Osbp15 Cas9-KO Strategy

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Project Overview

Project Name

Osbpl5

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Osbpl5* gene. The schematic diagram is as follows:



- The *Osbpl5* gene has 7 transcripts. According to the structure of *Osbpl5* gene, exon2-exon14 of *Osbpl5-201* (ENSMUST00000020411.13) transcript is recommended as the knockout region. The region contains 1639bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Osbpl5* gene. The brief process is as follows: CRISPR/Cas9 system v

- Transcript *Osbpl5*-204&205 may not be affected.
- The *Osbpl5* 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)

Osbp15 oxysterol binding protein-like 5 [*Mus musculus* (house mouse)]

Gene ID: 79196, updated on 10-Oct-2019

Summary

Official Symbol	Osbp15 provided by MGI
Official Full Name	oxysterol binding protein-like 5 provided by MGI
Primary source	MGI:MGI:1930265
See related	Ensembl:ENSMUSG00000037606
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	ORP5; Obph1; Osbp2; AI462538; 1110006M06Rik
Expression	Ubiquitous expression in lung adult (RPKM 27.8), ovary adult (RPKM 26.8) and 24 other tissues See more
Orthologs	human all

Genomic context

Location: 7 F5; 7 88.29 cM See Osbp15 in [Genome Data Viewer](#)

Exon count: 25

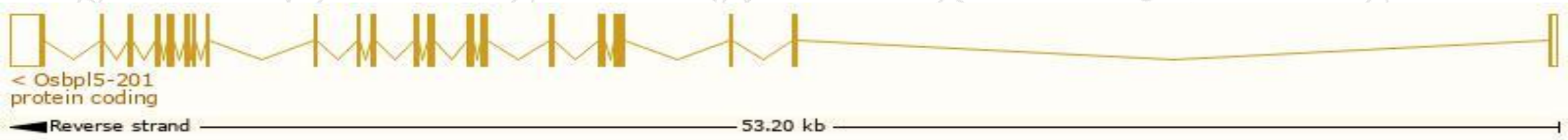
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	7	NC_000073.6 (143688762..143757025, complement)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	7	NC_000073.5 (150874667..150927868, complement)

Transcript information (Ensembl)

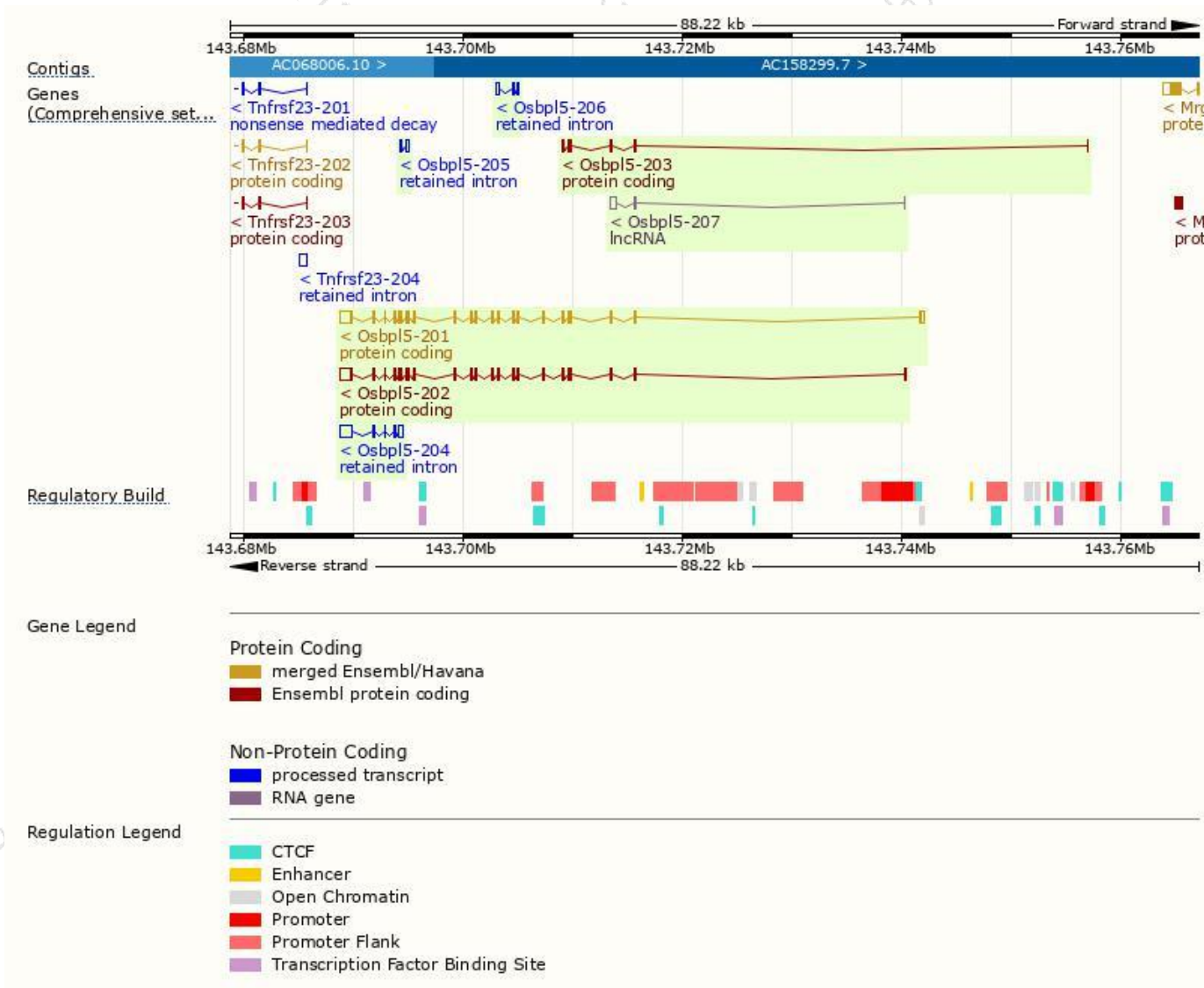
The gene has 7 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Osbpl5-201	ENSMUST00000020411.13	3994	898aa	Protein coding	CCDS40200	G5E833	TSL:1 GENCODE basic APPRIS P3
Osbpl5-202	ENSMUST00000119499.7	3775	874aa	Protein coding	CCDS57598	Q9ER64	TSL:1 GENCODE basic APPRIS ALT2
Osbpl5-203	ENSMUST00000134056.1	634	199aa	Protein coding	-	D3YWU9	CDS 3' incomplete TSL:3
Osbpl5-204	ENSMUST00000137627.1	1917	No protein	Retained intron	-	-	TSL:3
Osbpl5-206	ENSMUST00000149736.1	626	No protein	Retained intron	-	-	TSL:3
Osbpl5-205	ENSMUST00000140502.1	399	No protein	Retained intron	-	-	TSL:3
Osbpl5-207	ENSMUST00000153864.1	700	No protein	lncRNA	-	-	TSL:5

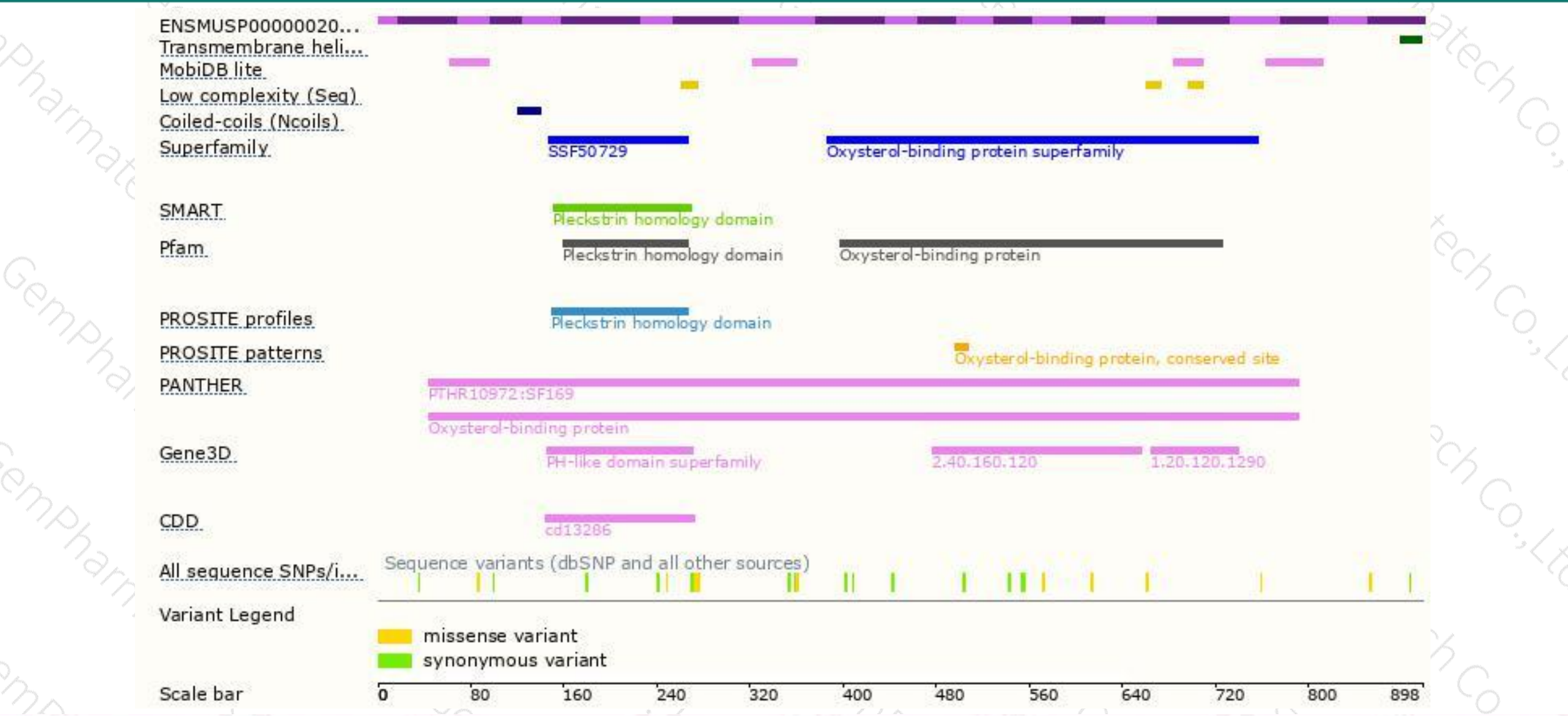
The strategy is based on the design of *Osbpl5-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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