

# *Ovgp1* Cas9-KO Strategy

**Designer:**

**JiaYu**

**Reviewer:**

**Xiaojing Li**

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# Project Overview

**Project Name**

*Ovgp1*

**Project type**

**Cas9-KO**

**Strain background**

**C57BL/6JGpt**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Ovgp1* gene. The schematic diagram is as follows:



- The *Ovgp1* gene has 4 transcripts. According to the structure of *Ovgp1* gene, exon4-exon9 of *Ovgp1-201* (ENSMUST00000000573.8) 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 *Ovgp1* gene. The brief process is as follows: CRISPR/Cas9 system

- According to the existing MGI data, Mice homozygous for disruptions in this gene show no phenotypic abnormalities. Female reproduction is essentially normal.
- Some amino acids will remain at the N-terminus and some functions may be retained.
- The flox region overlap with part of the Gm42890 gene, which may affect the regulation of this gene.
- The *Ovgp1* gene is located on the Chr3. 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)

## Ovgp1 oviductal glycoprotein 1 [Mus musculus (house mouse)]

Gene ID: 12659, updated on 31-Jan-2019

### Summary



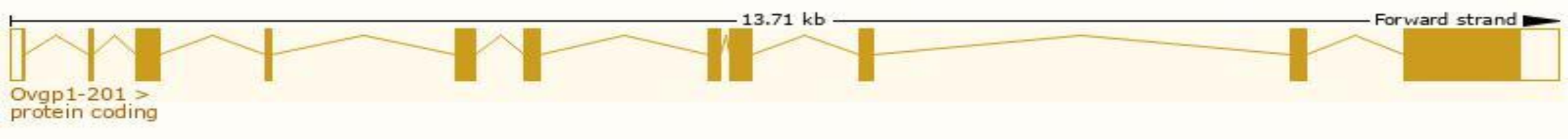
<b>Official Symbol</b>	Ovgp1 provided by <a href="#">MGI</a>
<b>Official Full Name</b>	oviductal glycoprotein 1 provided by <a href="#">MGI</a>
<b>Primary source</b>	<a href="#">MGI:MGI:106661</a>
<b>See related</b>	<a href="#">Ensembl:ENSMUSG00000074340</a>
<b>Gene type</b>	protein coding
<b>RefSeq status</b>	PROVISIONAL
<b>Organism</b>	<a href="#">Mus musculus</a>
<b>Lineage</b>	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
<b>Also known as</b>	120kDa, AU016433, AU019448, Chit5, MOGP, OGP, muc9
<b>Expression</b>	Biased expression in ovary adult (RPKM 257.8) and testis adult (RPKM 8.3) <a href="#">See more</a>
<b>Orthologs</b>	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

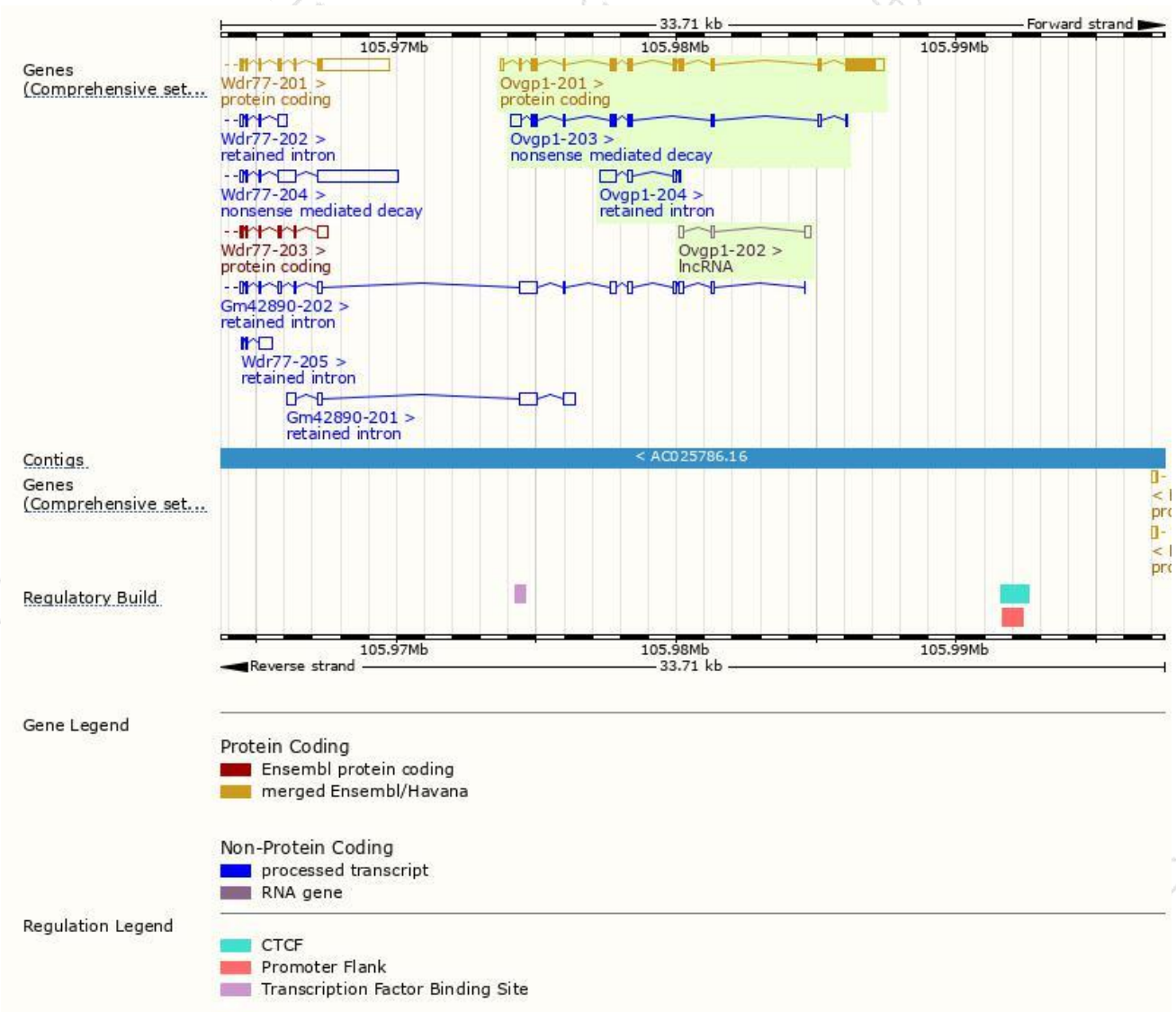
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Ovgp1-201	<a href="#">ENSMUST00000000573.8</a>	2616	<a href="#">721aa</a>	Protein coding	<a href="#">CCDS17716</a>	<a href="#">Q54AJ4</a> <a href="#">Q62010</a>	TSL:1 GENCODE basic APPRIS P1
Ovgp1-203	<a href="#">ENSMUST00000163626.1</a>	1213	<a href="#">232aa</a>	Nonsense mediated decay	-	<a href="#">E9Q099</a>	TSL:5
Ovgp1-204	<a href="#">ENSMUST00000164055.1</a>	818	No protein	Retained intron	-	-	TSL:5
Ovgp1-202	<a href="#">ENSMUST00000092878.4</a>	525	No protein	lncRNA	-	-	TSL:3

The strategy is based on the design of *Ovgp1-201* transcript,The transcription is shown below

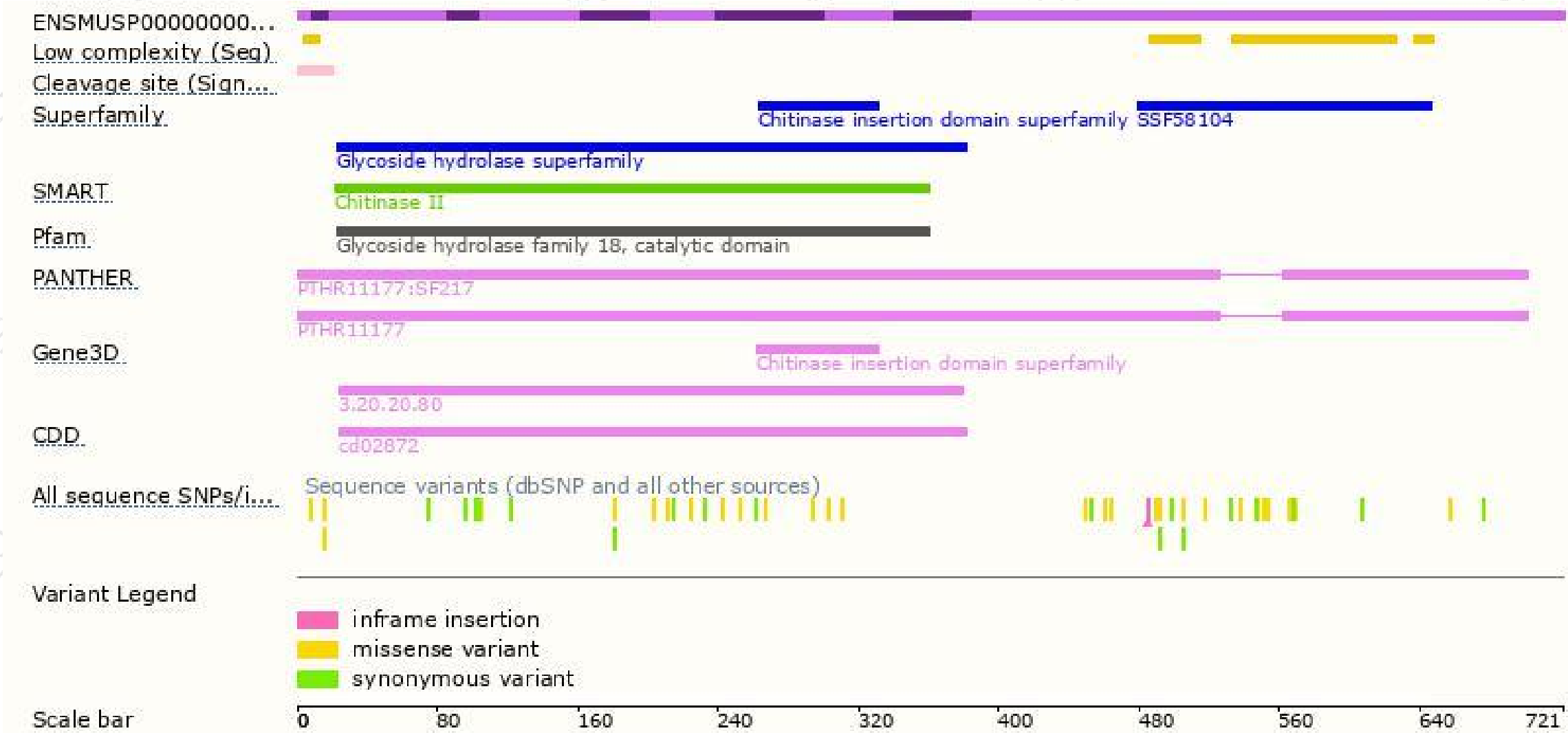


# Genomic location distribution





# Protein domain



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

Tel: 400-9660890

