

# *Wipi1* Cas9-KO Strategy

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# Project Overview

**Project Name**

*Wipi1*

**Project type**

**Cas9-KO**

**Strain background**

**C57BL/6JGpt**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Wipi1* gene. The schematic diagram is as follows:



- The *Wipi1* gene has 4 transcripts. According to the structure of *Wipi1* gene, exon2 of *Wipi1-202* (ENSMUST00000103060.9) transcript is recommended as the knockout region. The region contains 83bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Wipi1* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Wipi1* gene is located on the Chr11. 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)

## Wipi1 WD repeat domain, phosphoinositide interacting 1 [ *Mus musculus* (house mouse) ]

Gene ID: 52639, updated on 31-Jan-2019

### Summary

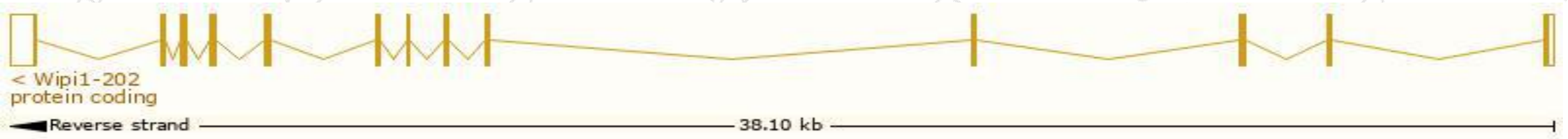
Official Symbol	Wipi1 provided by <a href="#">MGI</a>
Official Full Name	WD repeat domain, phosphoinositide interacting 1 provided by <a href="#">MGI</a>
Primary source	<a href="#">MGI:MGI:1261864</a>
See related	<a href="#">Ensembl:ENSMUSG000000041895</a>
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	<a href="#">Mus musculus</a>
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	AW411817; D11Ert498e; 4930533H01Rik
Expression	Ubiquitous expression in heart adult (RPKM 28.8), subcutaneous fat pad adult (RPKM 20.4) and 28 other tissues <a href="#">See more</a>
Orthologs	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

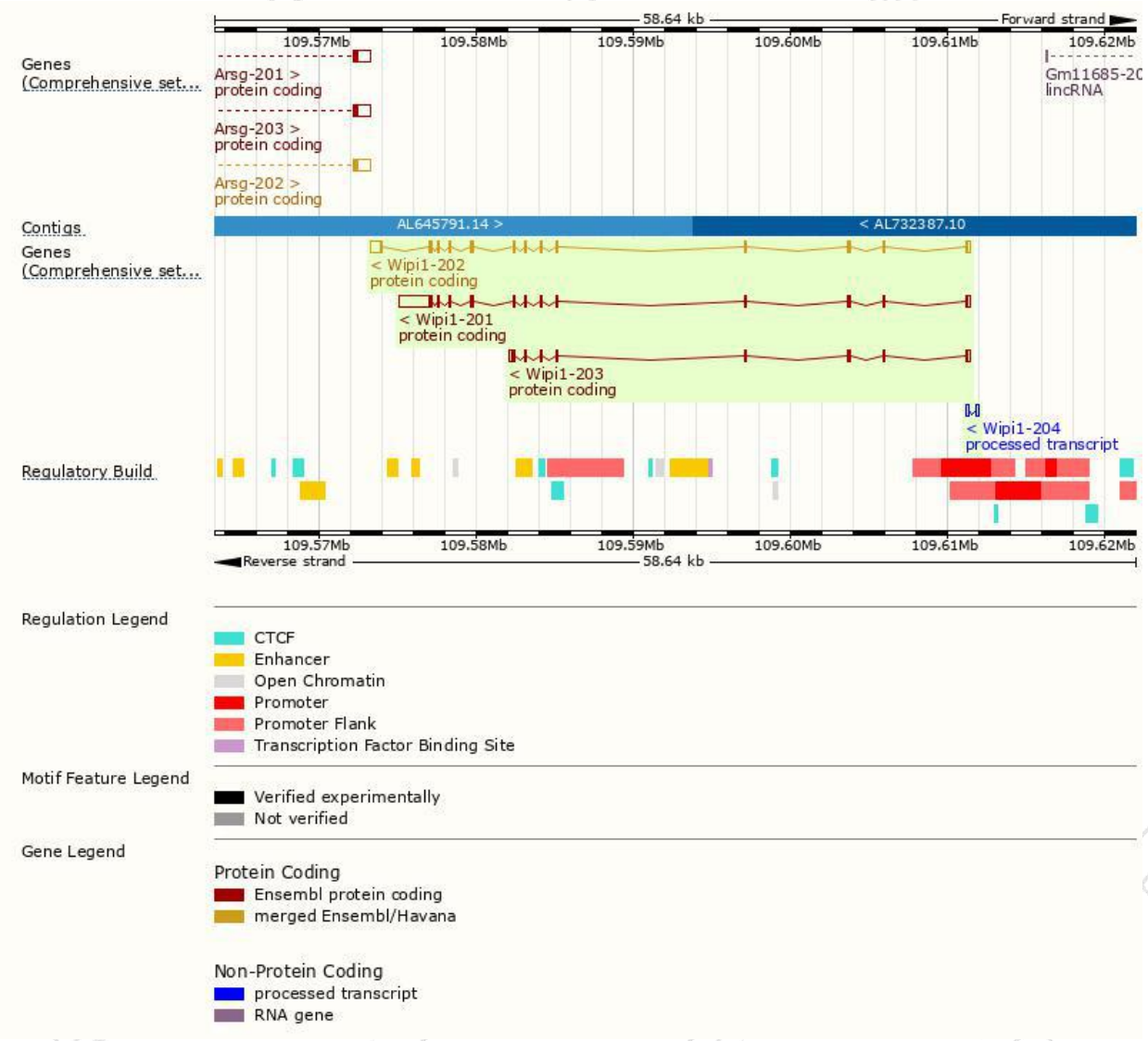
The gene has 4 transcripts,all transcripts are shown below:

Show/hide columns (1 hidden)							Filter	
Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags	
Wipi1-204	<a href="#">ENSMUST00000153738.1</a>	237	No protein	lncRNA	-	-	TSL:5	
Wipi1-203	<a href="#">ENSMUST00000106689.1</a>	1220	<a href="#">295aa</a>	Protein coding	-	<a href="#">B1AT64</a>	TSL:1	GENCODE basic
Wipi1-202	<a href="#">ENSMUST00000103060.9</a>	2050	<a href="#">446aa</a>	Protein coding	<a href="#">CCDS25582</a>	<a href="#">Q8R3E3</a>	TSL:1	GENCODE basic APPRIS P1
Wipi1-201	<a href="#">ENSMUST00000047186.9</a>	3338	<a href="#">437aa</a>	Protein coding	-	<a href="#">Q8R3E3</a>	TSL:1	GENCODE basic

The strategy is based on the design of *Wipi1-202* transcript,The transcription is shown below

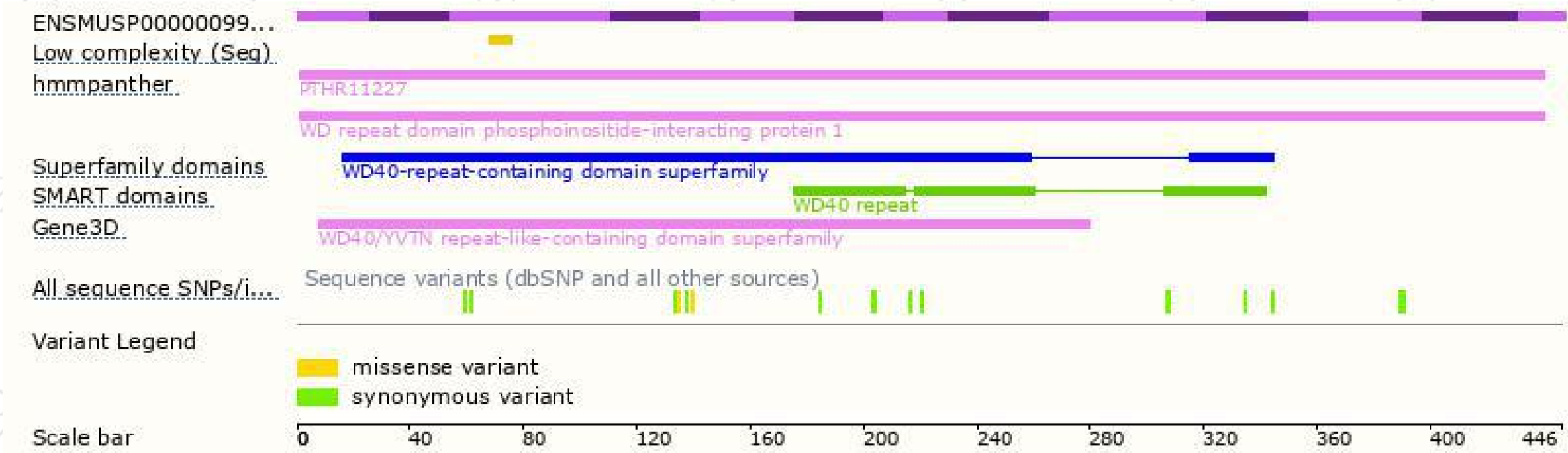


# Genomic location distribution





# Protein domain



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

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