

Yipf5 Cas9-KO Strategy

Designer: Xueting Zhang

Project Overview

Project Name

Yipf5

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Yipf5* gene. The schematic diagram is as follows:



- The *Yipf5* gene has 3 transcripts. According to the structure of *Yipf5* gene, exon3-exon4 of *Yipf5-201* (ENSMUST00000025364.5) transcript is recommended as the knockout region. The region contains 319bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Yipf5* gene. The brief process is as follows: CRISPR/Cas9 system v

- The *Yipf5* gene is located on the Chr18. 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)

Yipf5 Yip1 domain family, member 5 [Mus musculus (house mouse)]

Gene ID: 67180, updated on 31-Jan-2019

Summary



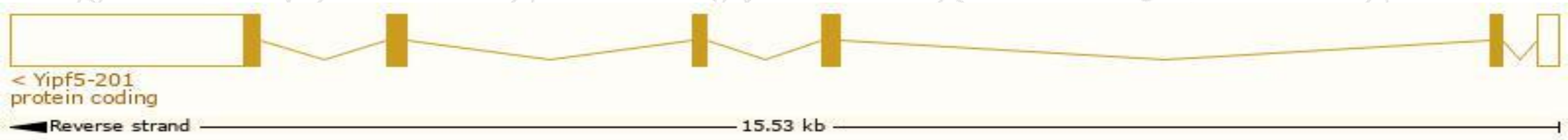
Official Symbol	Yipf5 provided by MGI
Official Full Name	Yip1 domain family, member 5 provided by MGI
Primary source	MGI:MGI:1914430
See related	Ensembl:ENSMUSG00000024487
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	261031119Rik, AA408236, Yip1a
Expression	Ubiquitous expression in placenta adult (RPKM 24.2), limb E14.5 (RPKM 21.6) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

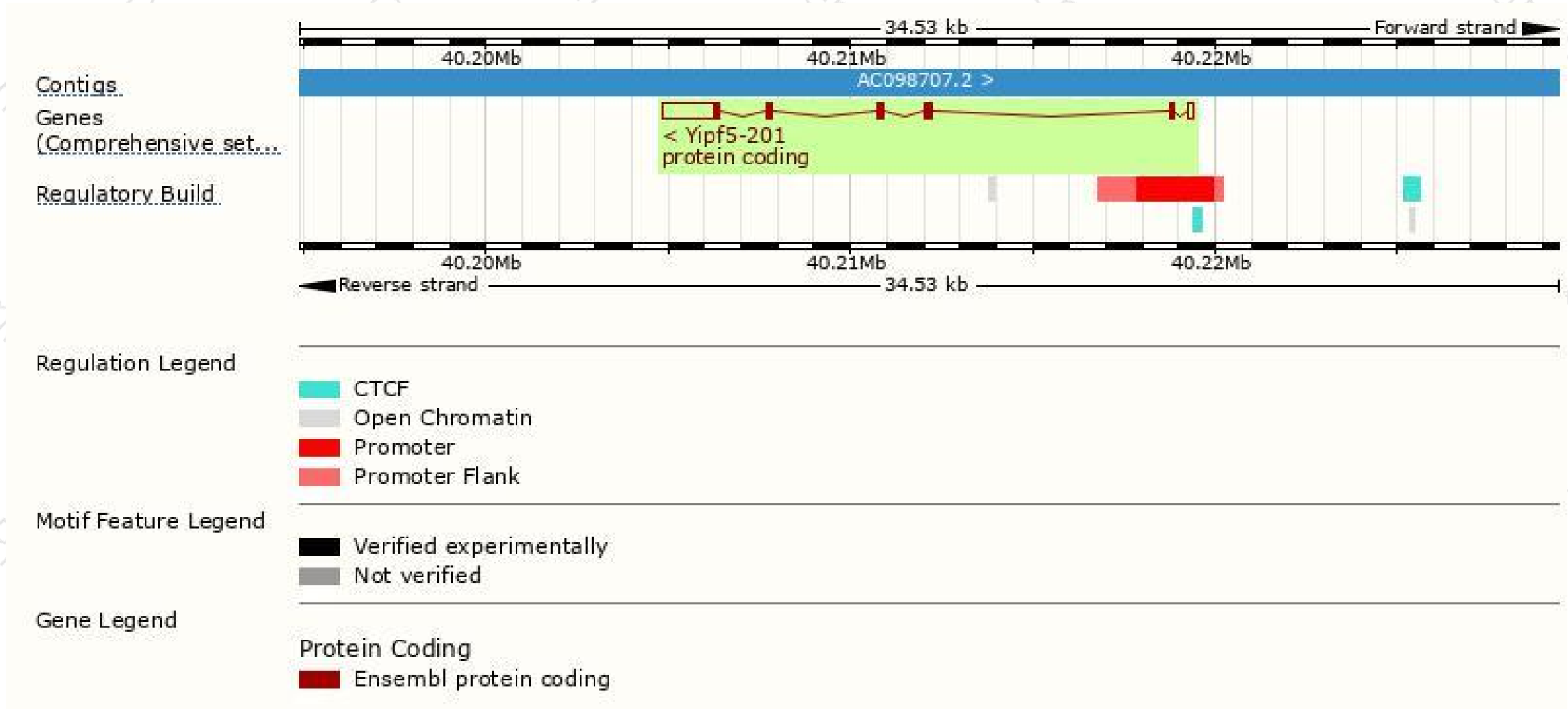
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Yipf5-201	ENSMUST00000025364.5	3328	257aa	Protein coding	CCDS29207	Q9EQQ2	TSL:1 GENCODE basic APPRIS P1
Yipf5-202	ENSMUST000000236741.1	607	No protein	Processed transcript	-	-	
Yipf5-203	ENSMUST000000237176.1	426	No protein	Retained intron	-	-	

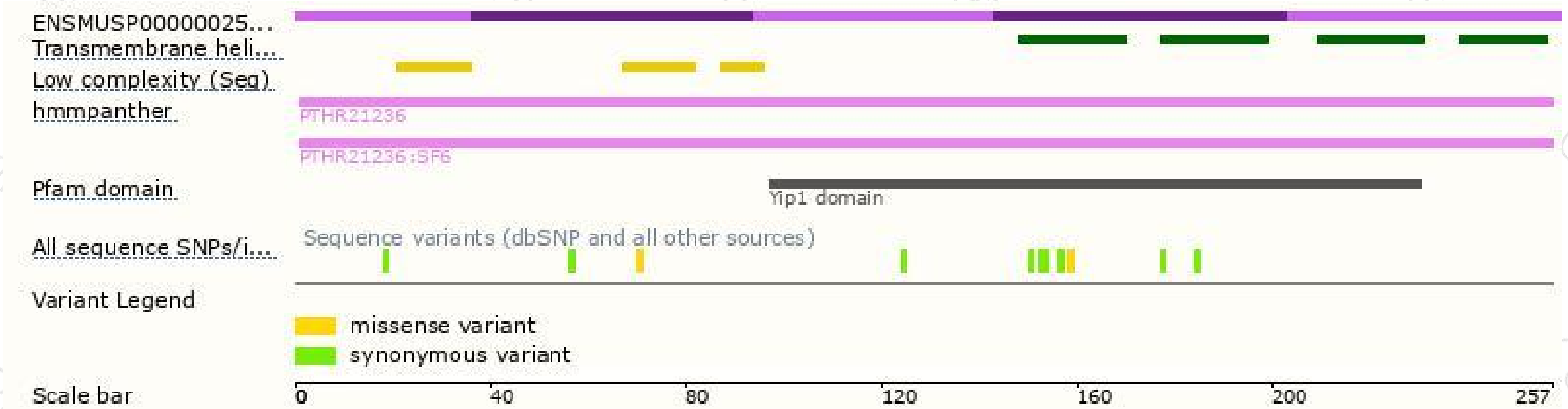
The strategy is based on the design of *Yipf5-201* transcript,The transcription is shown below



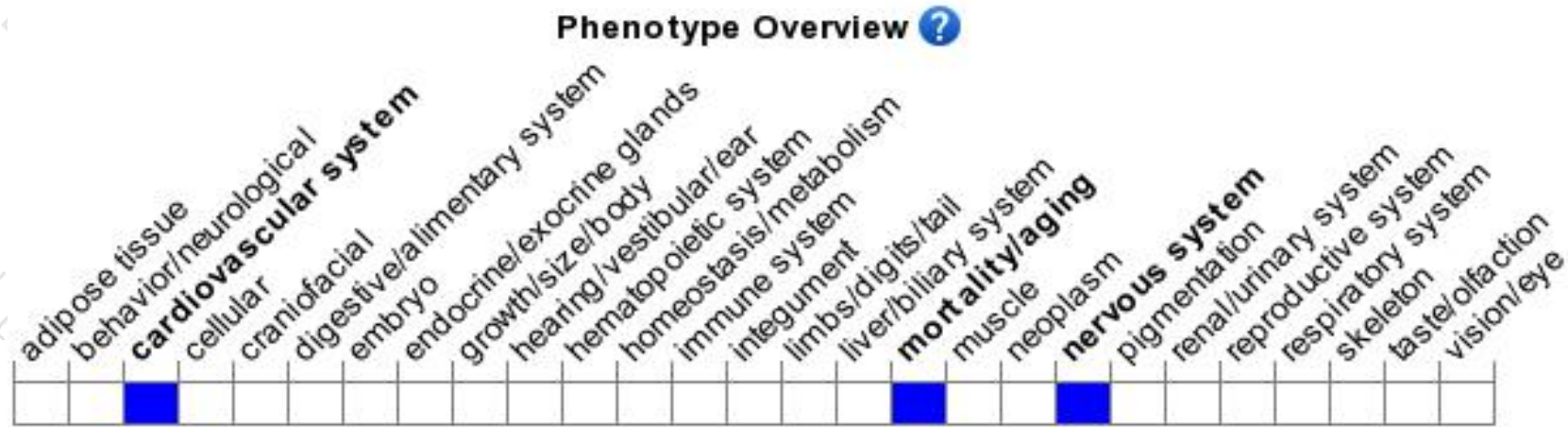
Genomic location distribution



Protein domain



Mouse phenotype description(MGI)



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

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

Tel: 400-9660890

