

Ykt6 Cas9-KO Strategy

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Reviewer:

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Project Overview

Project Name

Ykt6

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Ykt6* gene. The schematic diagram is as follows:



- The *Ykt6* gene has 2 transcripts. According to the structure of *Ykt6* gene, exon3-exon6 of *Ykt6-201* (ENSMUST00000002818.8) transcript is recommended as the knockout region. The region contains 374bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Ykt6* gene. The brief process is as follows: CRISPR/Cas9 system w

- The *Ykt6* 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)

Ykt6 YKT6 v-SNARE homolog (S. cerevisiae) [Mus musculus (house mouse)]

Gene ID: 56418, updated on 31-Jan-2019

Summary



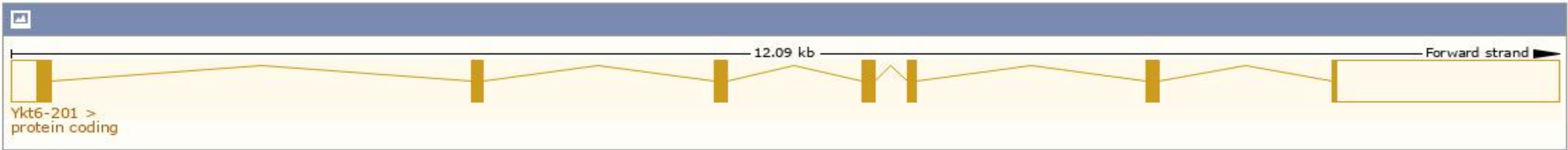
Official Symbol	Ykt6 provided by MGI
Official Full Name	YKT6 v-SNARE homolog (S. cerevisiae) provided by MGI
Primary source	MGI:MGI:1927550
See related	Ensembl:ENSMUSG00000002741
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	0610042I15Rik, 1810013M05Rik, AW105923
Expression	Ubiquitous expression in large intestine adult (RPKM 32.6), CNS E14 (RPKM 26.9) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

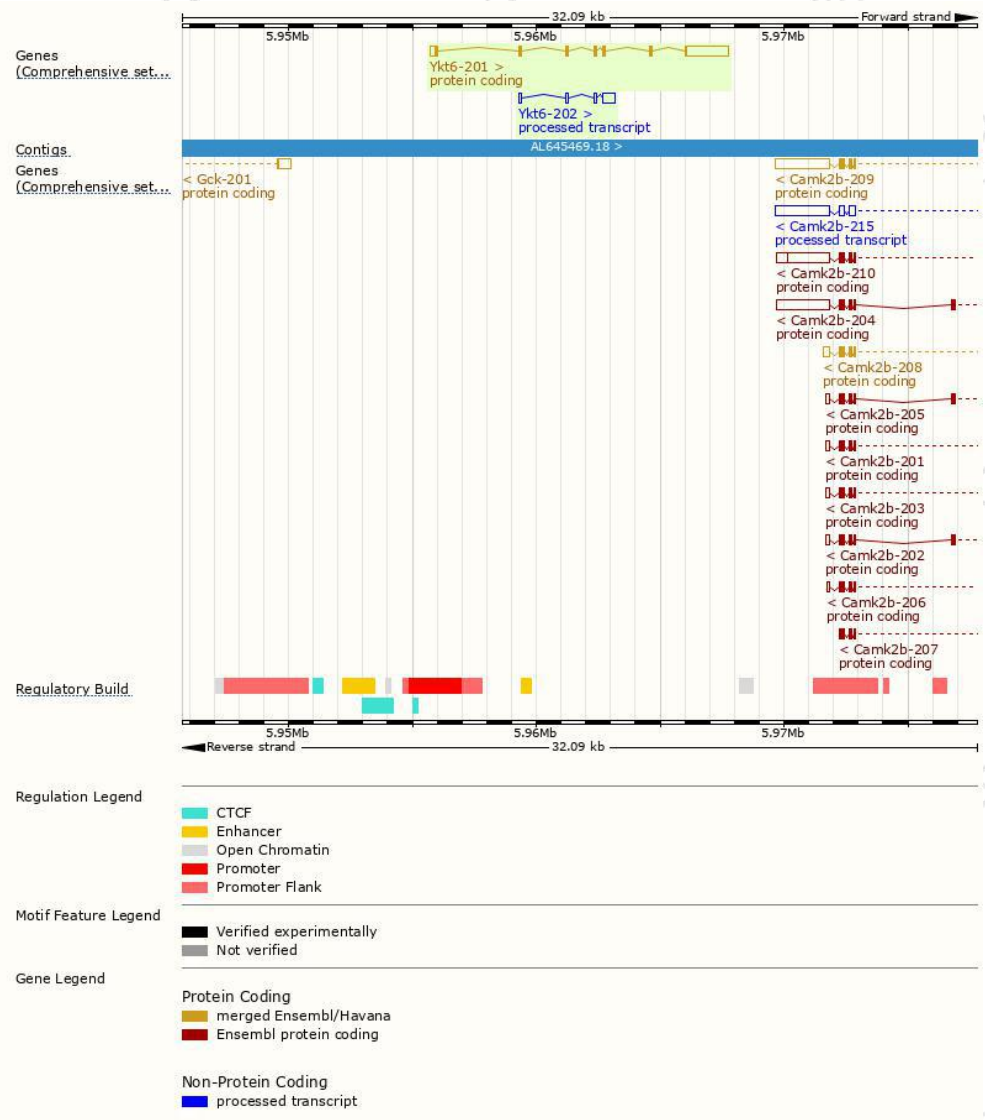
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Ykt6-201	ENSMUST00000002818.8	2541	198aa	Protein coding	CCDS24410	Q9CQW1	TSL:1 GENCODE basic APPRIS P1
Ykt6-202	ENSMUST00000143834.1	791	No protein	Processed transcript	-	-	TSL:5

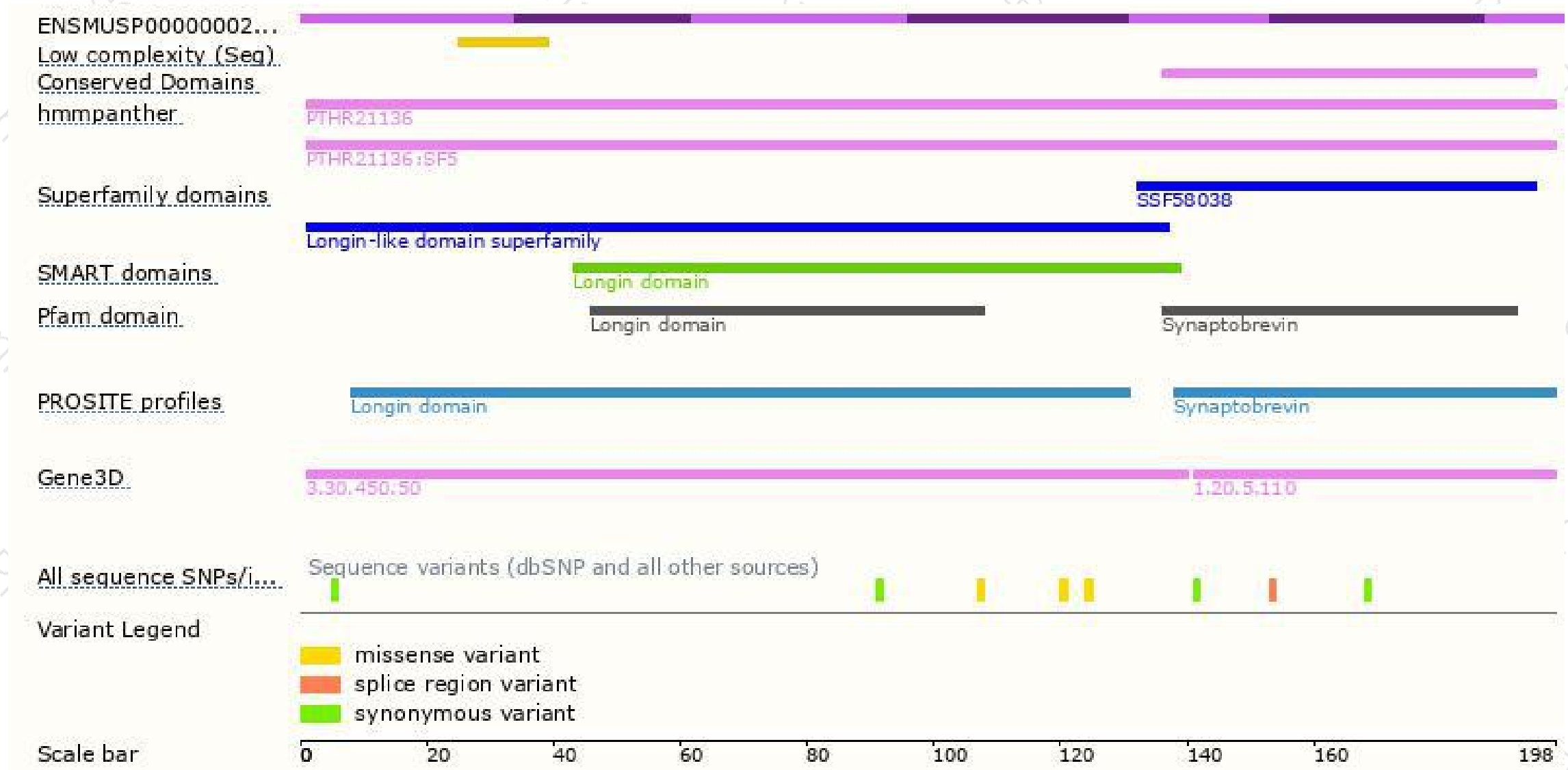
The strategy is based on the design of *Ykt6-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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