

***Klhl36* Cas9-KO Strategy**

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Project Overview

Project Name

Klhl36

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Klhl36* gene. The schematic diagram is as follows:



- The *Klhl36* gene has 3 transcripts. According to the structure of *Klhl36* gene, exon3-exon4 of *Klhl36*-201(ENSMUST00000034287.9) transcript is recommended as the knockout region. The region contains 1229bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Klhl36* gene. The brief process is as follows: CRISPR/Cas9 system were microinjected into the fertilized eggs of C57BL/6JGpt mice. Fertilized eggs were transplanted to obtain positive F0 mice which were confirmed by PCR and sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6JGpt mice.

- The *Klhl36* gene is located on the Chr8. 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)

Klhl36 kelch-like 36 [Mus musculus (house mouse)]

Gene ID: 234796, updated on 13-Mar-2020

Summary

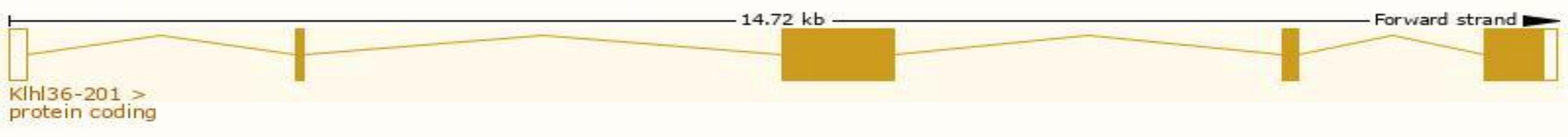
Official Symbol	Klhl36 provided by MGI
Official Full Name	kelch-like 36 provided by MGI
Primary source	MGI:MGI:2385305
See related	Ensembl:ENSMUSG00000031828
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Expression	Ubiquitous expression in ovary adult (RPKM 21.9), kidney adult (RPKM 16.6) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

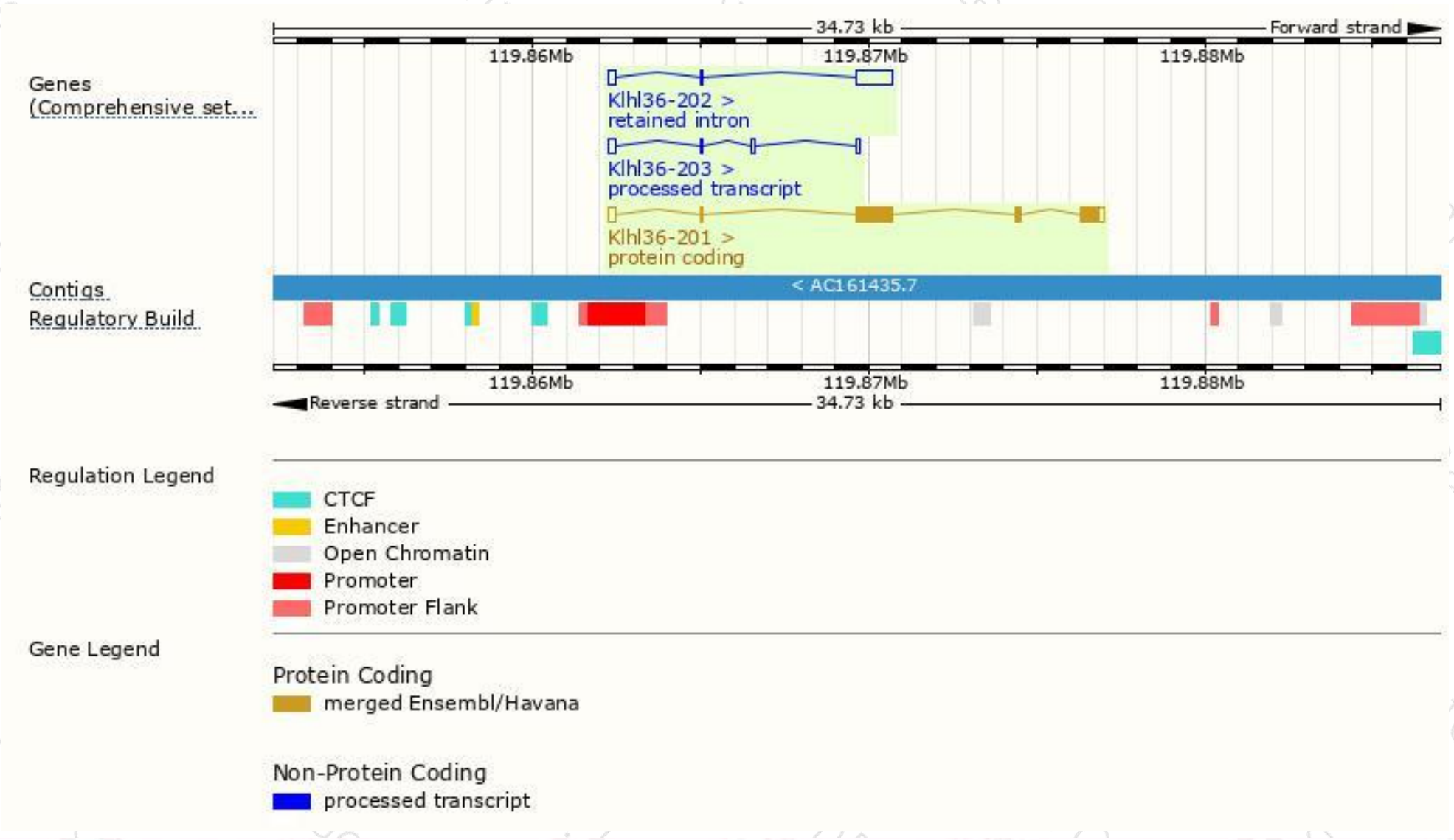
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Klhl36-201	ENSMUST00000034287.9	2181	613aa	Protein coding	CCDS22713	Q8R124	TSL:1 GENCODE basic APPRIS P1
Klhl36-203	ENSMUST00000212970.1	480	No protein	Processed transcript	-	-	TSL:5
Klhl36-202	ENSMUST00000212636.1	1354	No protein	Retained intron	-	-	TSL:1

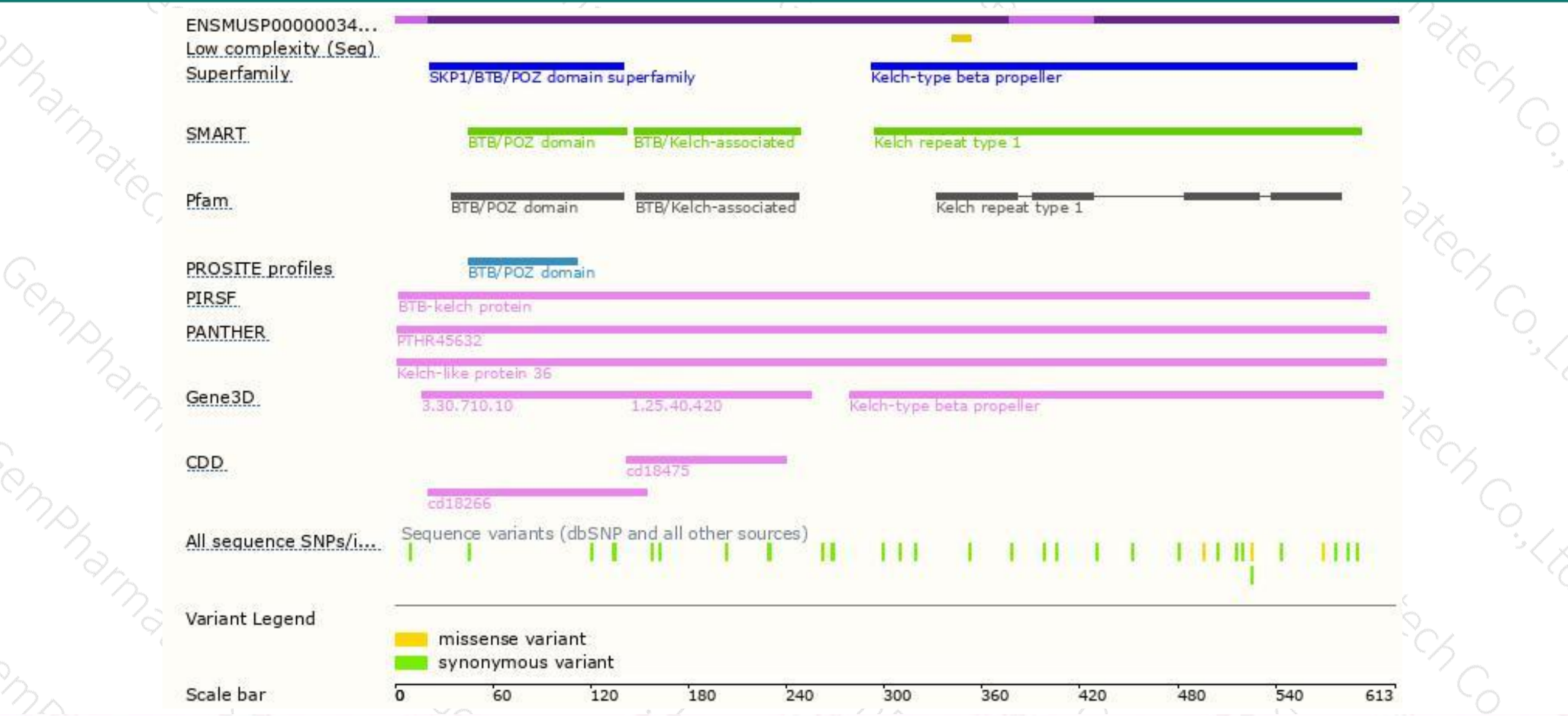
The strategy is based on the design of *Klhl36-201* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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

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