

***Trim66* Cas9-KO Strategy**

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Design Date: 2019-8-15

Project Overview

Project Name

Trim66

Project type

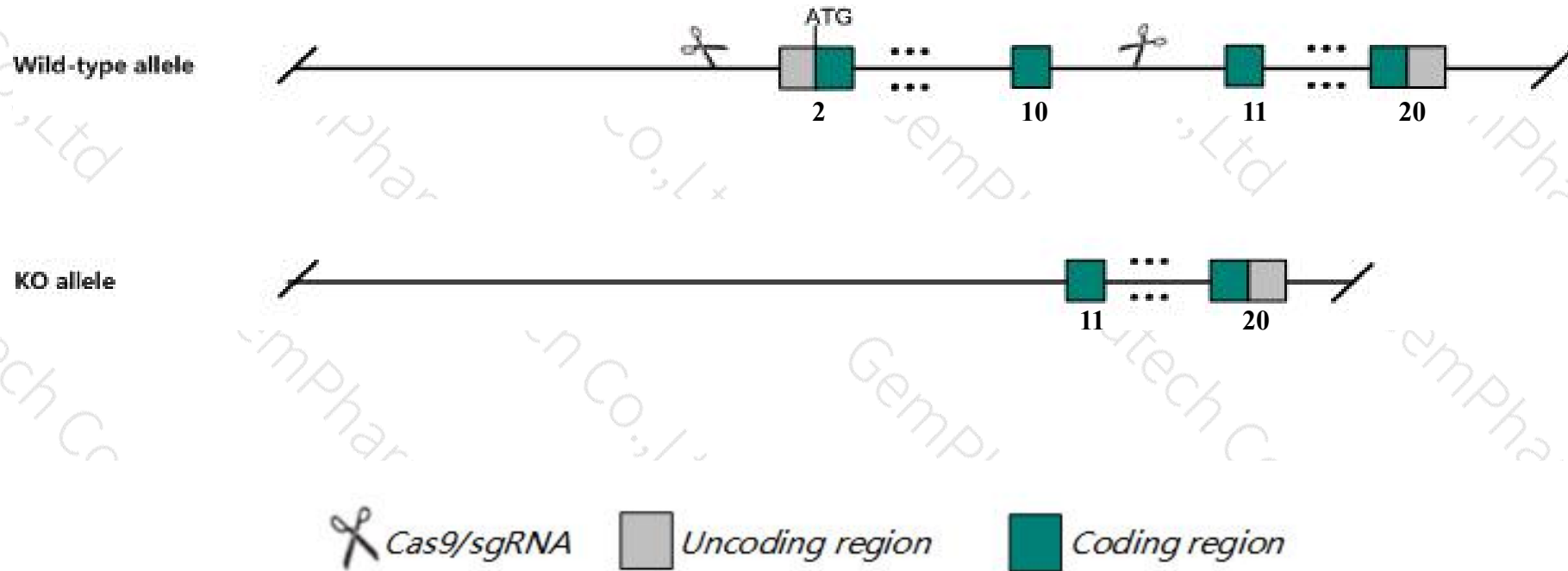
Cas9-KO

Strain background

C57BL/6J

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Trim66* gene. The schematic diagram is as follows:



- The *Trim66* gene has 4 transcripts. According to the structure of *Trim66* gene, exon2-exon10 of *Trim66-202* (ENSMUST00000106739.7) transcript is recommended as the knockout region. The region contains start codon ATG. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Trim66* gene. The brief process is as follows: sgRNA was transcribed in vitro. Cas9 and sgRNA were microinjected into the fertilized eggs of C57BL/6J 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/6J mice.

- The *Trim66* gene is located on the Chr7. 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)

Trim66 tripartite motif-containing 66 [Mus musculus (house mouse)]

Gene ID: 330627, updated on 5-Feb-2019

Summary



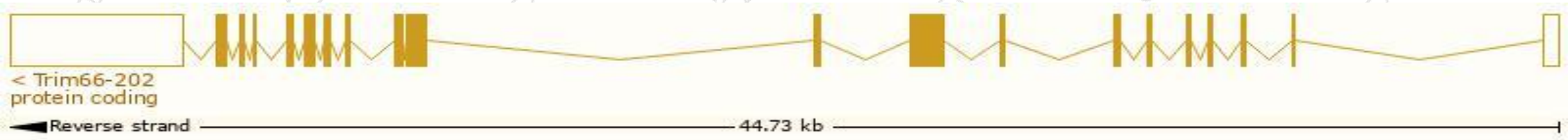
Official Symbol	Trim66 provided by MGI
Official Full Name	tripartite motif-containing 66 provided by MGI
Primary source	MGI:MGI:2152406
See related	Ensembl:ENSMUSG00000031026
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Kiaa0298-hp, Tif1d
Expression	Biased expression in testis adult (RPKM 5.6), cortex adult (RPKM 3.0) and 5 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

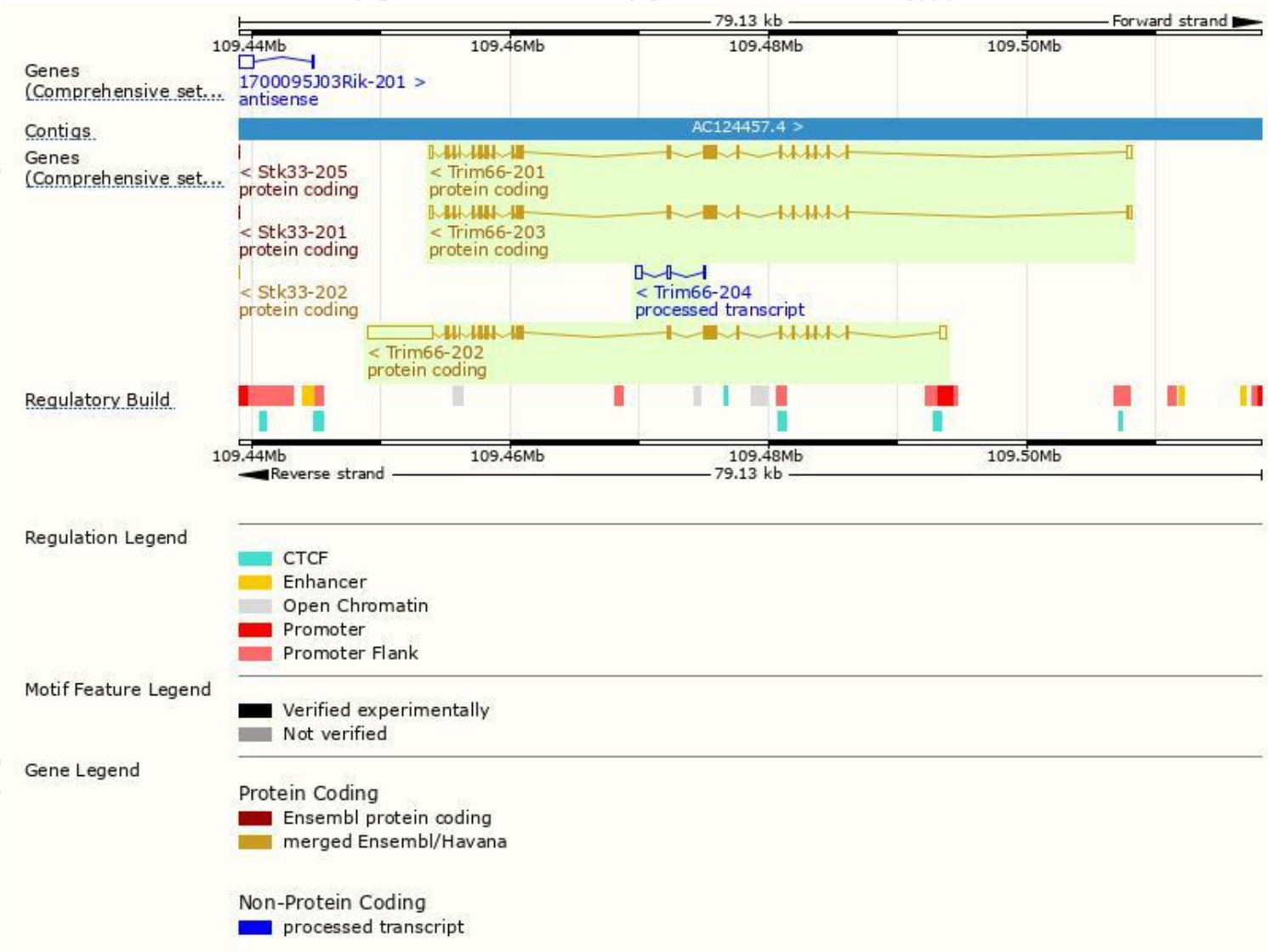
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Trim66-202	ENSMUST00000106739.7	9250	1233aa	Protein coding	CCDS52359	E9PZP2	TSL:1 GENCODE basic
Trim66-203	ENSMUST00000106741.9	4417	1344aa	Protein coding	CCDS52360	E9QLR8	TSL:1 GENCODE basic APPRIS P1
Trim66-201	ENSMUST00000033339.7	4354	1242aa	Protein coding	CCDS40082	Q924W6	TSL:1 GENCODE basic
Trim66-204	ENSMUST00000137704.1	726	No protein	Processed transcript	-	-	TSL:3

The strategy is based on the design of *Trim66-202* transcript,The transcription is shown below



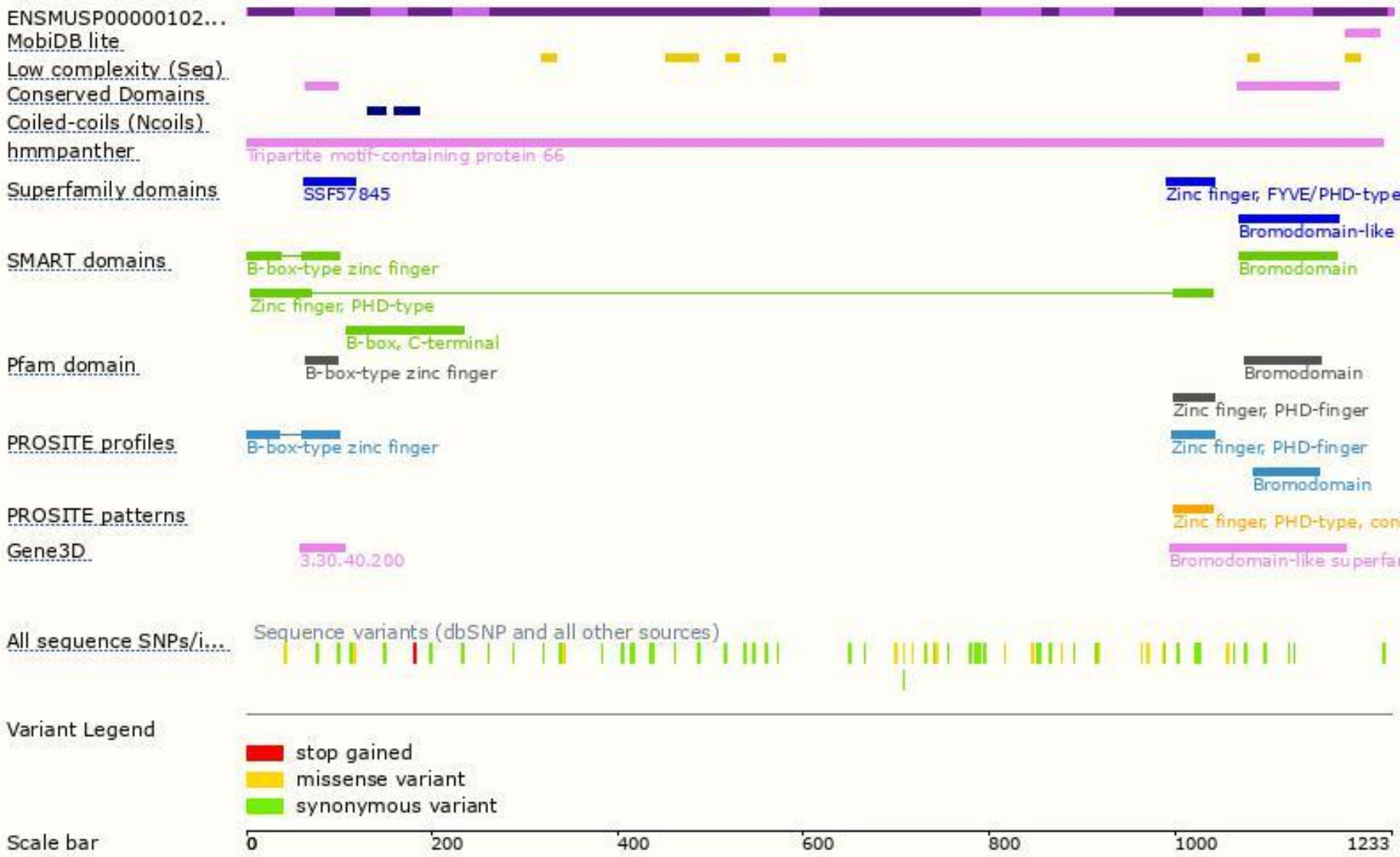
Genomic location distribution



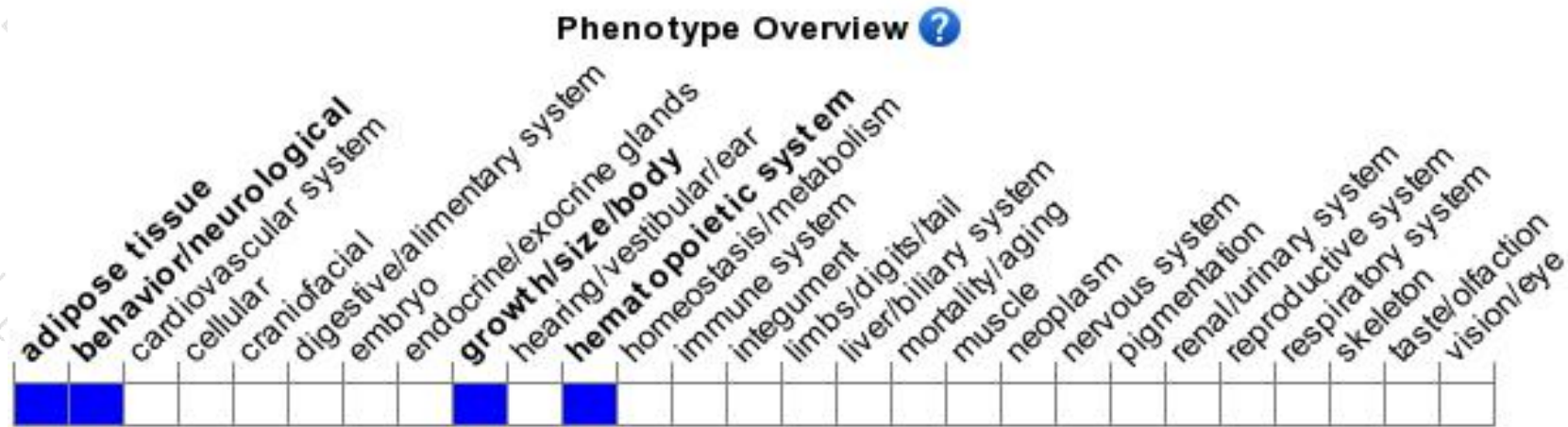
Protein domain



集萃药康
GemPharmatech



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.

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