Trim47 Cas9-KO Strategy

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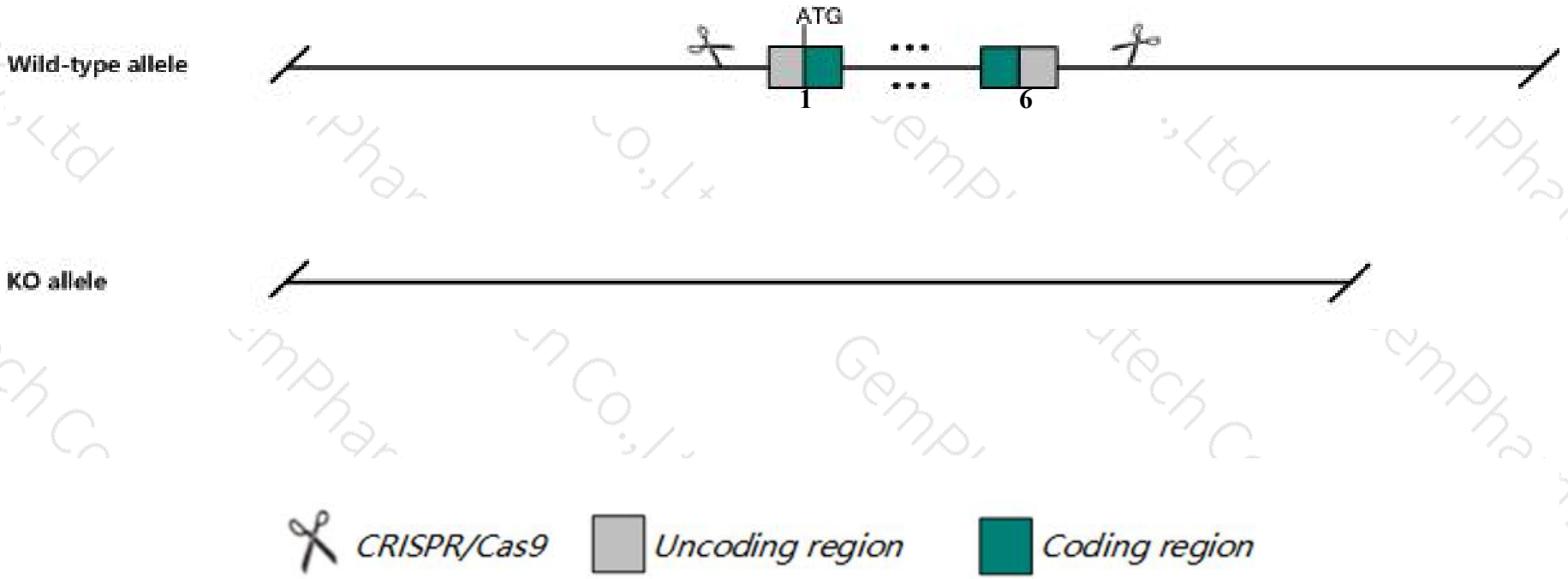
Project Overview

Project Name	***Trim47***
Project type	**Cas9-KO**
Strain background	**C57BL/6JGpt**

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Trim47* gene. The schematic diagram is as follows:



Technical routes

➢ The *Trim47* gene has 7 transcripts. According to the structure of *Trim47* gene, exon1-exon6 of *Trim47-201* (ENSMUST00000021120.5) transcript is recommended as the knockout region.The region contains all of the coding sequence.Knock out the region will result in disruption of protein function.

➢ In this project we use CRISPR/Cas9 technology to modify *Trim47* gene. The brief process is as follows: CRISPR/Cas9 systen

Notice

➢ The *Trim47* 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）

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Trim47 tripartite motif-containing 47 [Mus musculus (house mouse)]

Gene ID: 217333, updated on 19-Mar-2019

Summary

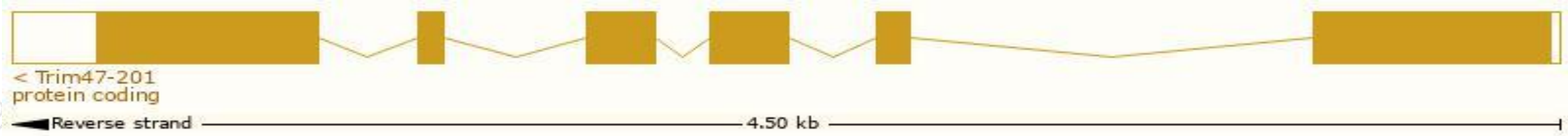
Official Symbol	Trim47 provided by MGI
Official Full Name	tripartite motif-containing 47 provided byMGI
Primary source	MGI:MGI:1917374
See related	Ensembl:ENSMUSG00000020773
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2210023F24Rik
Expression	Broad expression in stomach adult (RPKM 32.5), ovary adult (RPKM 32.0) and 21 other tissuesSee more
Orthologs	human all

Transcript information（Ensembl）

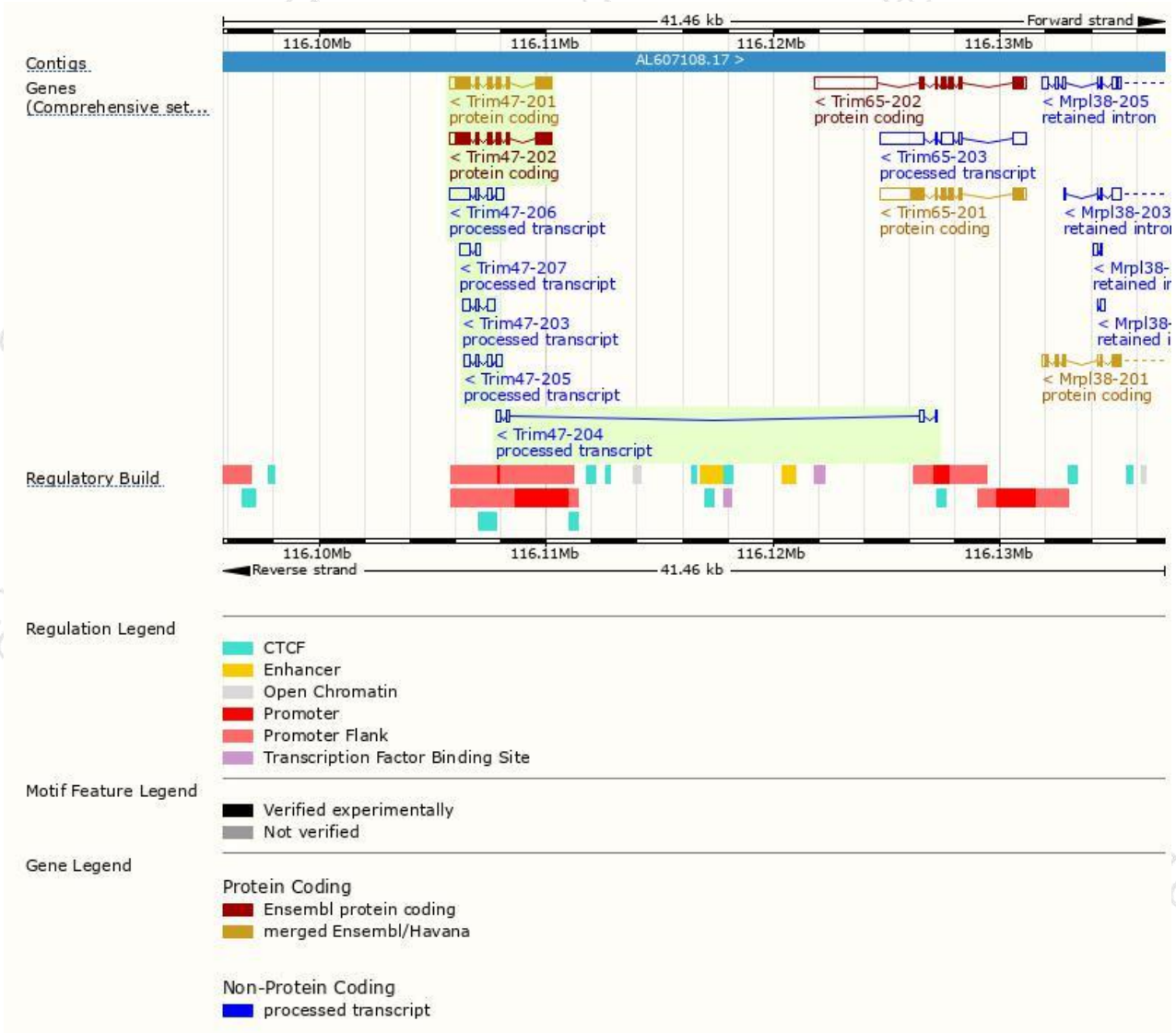
The gene has 7 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Trim47-201	ENSMUST00000021120.5	2204	642aa	Protein coding	CCDS56823	Q8C0E3	TSL:1 GENCODE basic APPRIS P4
Trim47-202	ENSMUST00000106441.7	2192	641aa	Protein coding	CCDS56822	Q8C0E3	TSL:1 GENCODE basic APPRIS ALT2
Trim47-206	ENSMUST00000141531.7	1503	No protein	Processed transcript	-	-	TSL:1
Trim47-205	ENSMUST00000134691.1	782	No protein	Processed transcript	-	-	TSL:3
Trim47-203	ENSMUST00000127235.1	692	No protein	Processed transcript	-	-	TSL:2
Trim47-207	ENSMUST00000149957.1	585	No protein	Processed transcript	-	-	TSL:2
Trim47-204	ENSMUST00000133039.1	519	No protein	Processed transcript	-	-	TSL:3

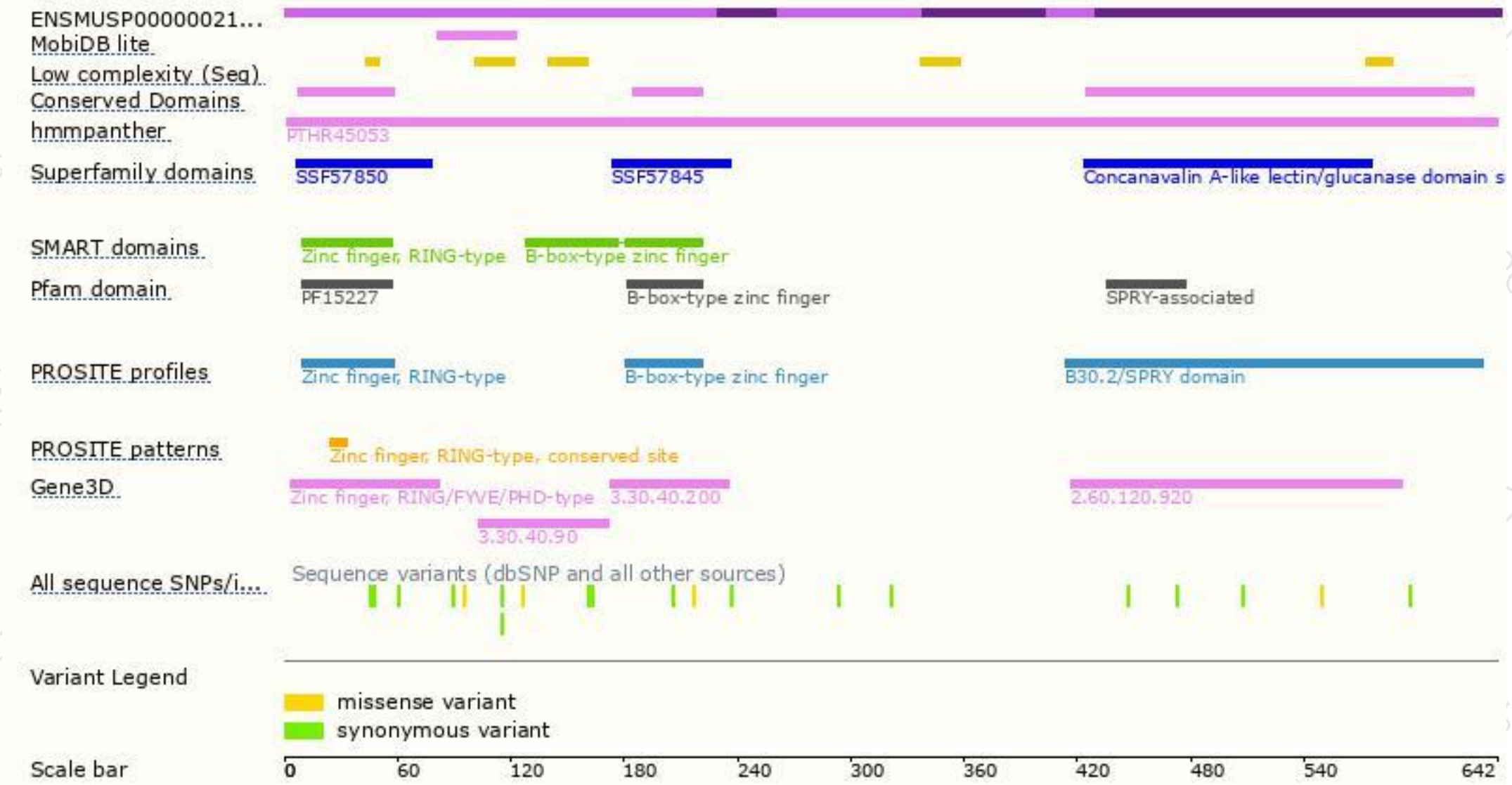
The strategy is based on the design of *Trim47-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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