Wdr5b Cas9-KO *Strategy*

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Project Overview

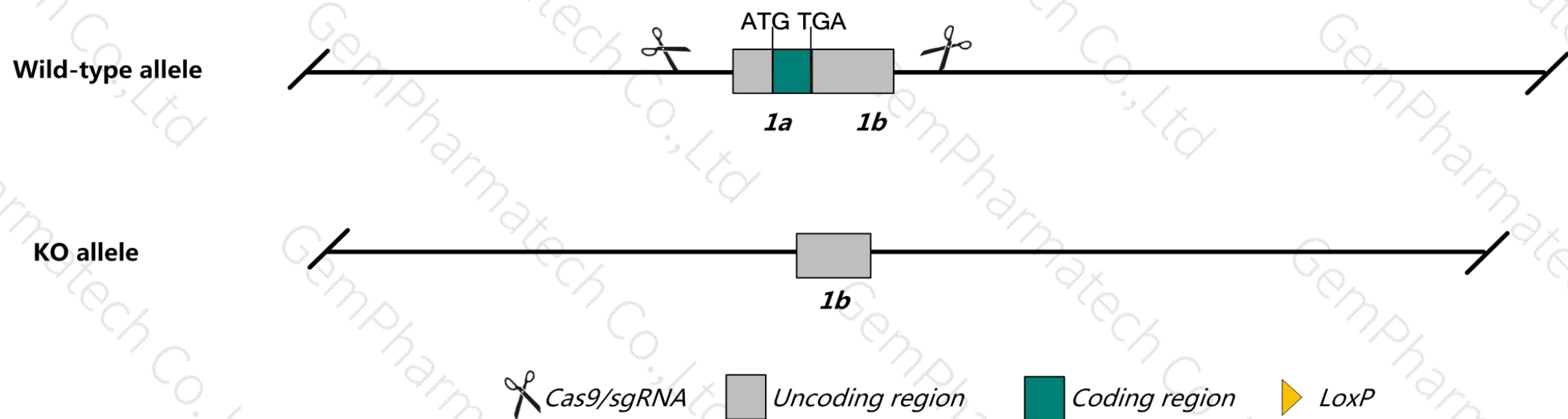|	
Project Name	*Wdr5b*
Project type	**Cas9-KO**
Strain background	**C57BL/6JGpt**

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Wdr5b* gene. The schematic diagram is as follows:

Technical routes

➢ The *Wdr5b* gene has 1 transcript.According to the structure of *Wdr5b* gene, exon1 of *Wdr5b*-201 (ENSMUST00000042203.9)transcript is recommended as the knockout region.The region contains all coding seqence.Knock out the region will result in disruption of protein function.

➢ In this project we use CRISPR/Cas9 technology to modify *Wdr5b* gene. The brief process is as follows: gRNA was transcribed in vitro.Cas9 and gRNA 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.

Notice

- The KO region contains functional region of the *Wdr5b* gene.

- The loxp site is at 3 'UTR of the *Wdr5b* gene.The KO region may affect the function of *Wdr5b* gene.

- The *Wdr5b* gene is located on the Chr16. 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 loxp insertion on gene transcription, RNA splicing and protein translation cannot be predicted at the existing technology level.

Wdr5b WD repeat domain 5B [*Mus musculus* (house mouse)]

Gene ID: 69544, updated on 12-Aug-2019

▲ Summary

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Official Symbol	Wdr5b provided by MGI
Official Full Name	WD repeat domain 5B provided by MGI
Primary source	MGI:MGI:1916794
See related	Ensembl:ENSMUSG00000034379
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
Also known as	AI606931; 2310009C03Rik
Orthologs	human all

Transcript information（Ensembl）

The gene has 1 transcript, the transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags		
Wdr5b-201	ENSMUST00000042203.9	2739	328aa	Protein coding	CCDS28145	Q9D7H2	TSL:NA	GENCODE basic	APPRIS P1

The strategy is based on the design of *Wdr5b*-201 transcript,The transcription is shown below:

2.74 kb   Forward strand ▶

Wdr5b-201 >
protein coding
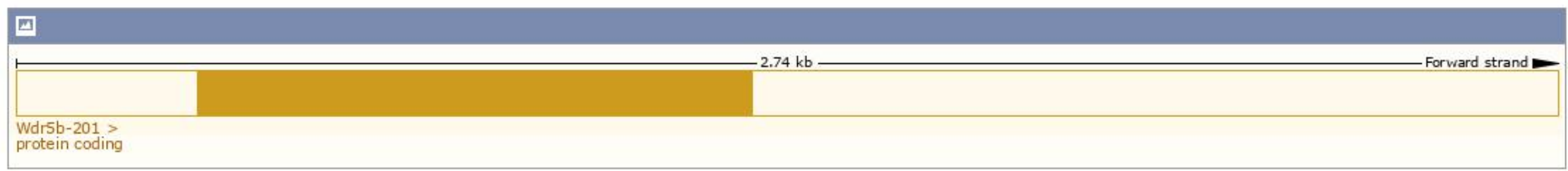
Genomic location（Ensembl）
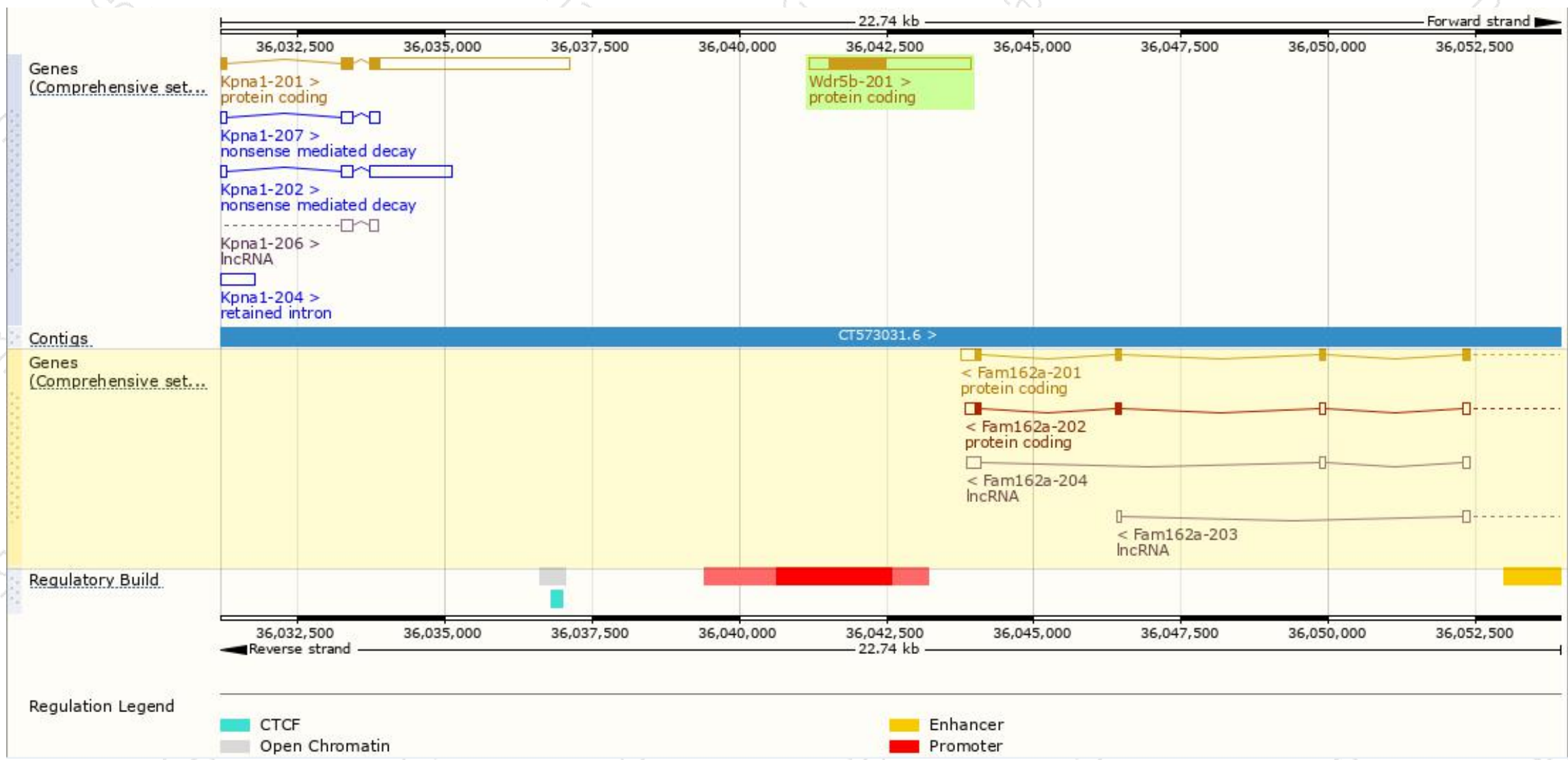
Protein domain（Ensembl）
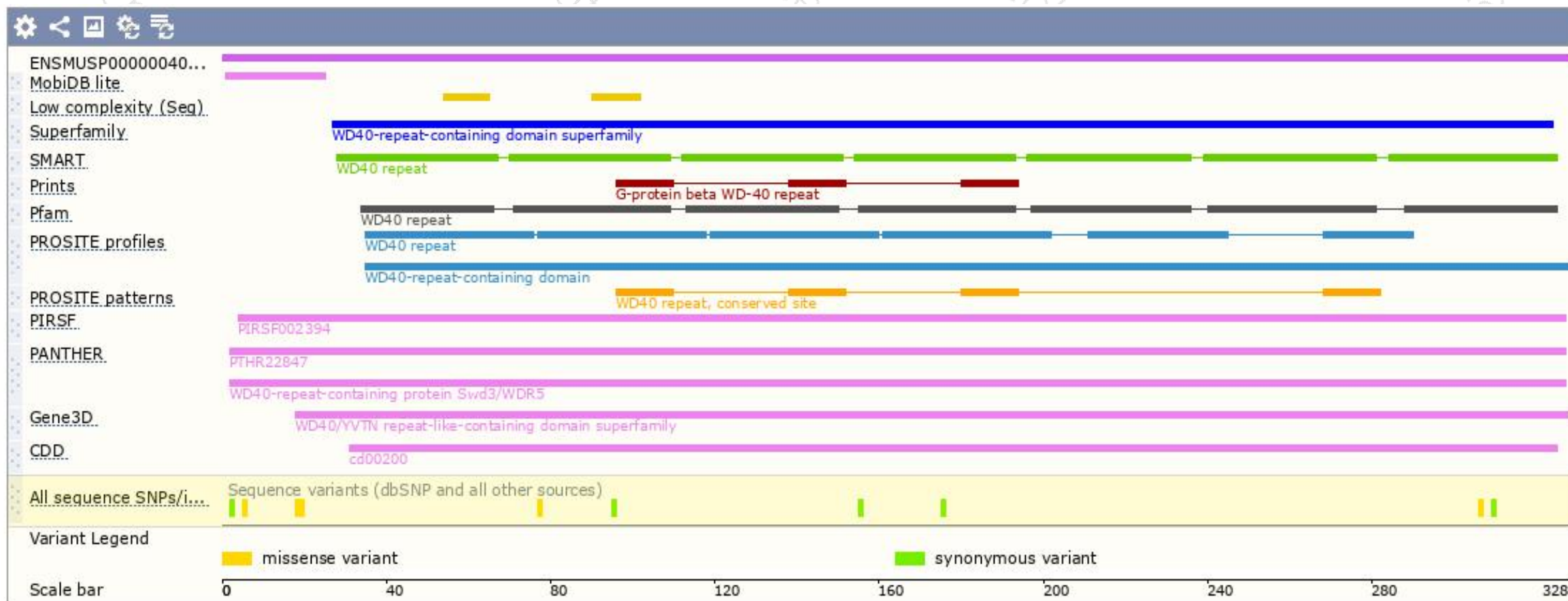
If you have any questions, you are welcome to inquire.
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