Ccnjl Cas9-KO Strategy

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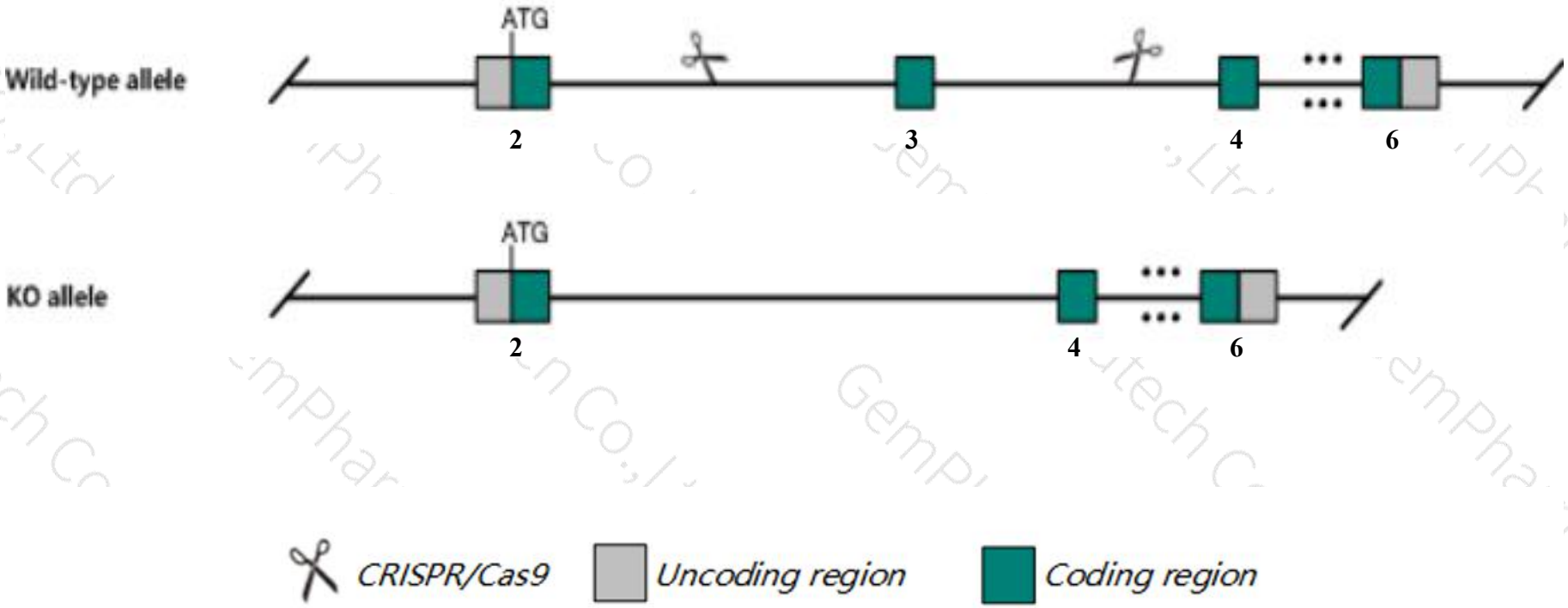
Design Date: 2020-4-15

Project Overview

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

Knockout strategy

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



Technical routes

➢ The *Ccnjl* gene has 2 transcripts. According to the structure of *Ccnjl* gene, exon3 of *Ccnjl-201* (ENSMUST00000050574.6) transcript is recommended as the knockout region.The region contains 214bp coding sequence. Knock out the region will result in disruption of protein function.

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

Notice

➢ The *Ccnjl* 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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Ccnjl cyclin J-like [Mus musculus (house mouse)]

Gene ID: 380694, updated on 13-Mar-2020

Summary

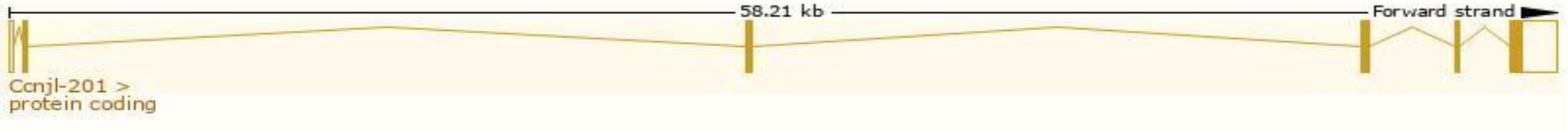
Official Symbol	Ccnjl provided by MGI
Official Full Name	cyclin J-like provided by MGI
Primary source	MGI:MGI:2685723
See related	Ensembl:ENSMUSG00000044707
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Gm877
Expression	Ubiquitous expression in CNS E11.5 (RPKM 5.9), ovary adult (RPKM 3.7) and 26 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
Ccnjl-201	ENSMUST00000050574.6	2672	387aa	Protein coding	CCDS24559	Q5SRT8	TSL:1 GENCODE basic APPRIS P1
Ccnjl-202	ENSMUST00000152153.1	349	No protein	Processed transcript	-	-	TSL:2

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



Genomic location distribution

Regulation Legend

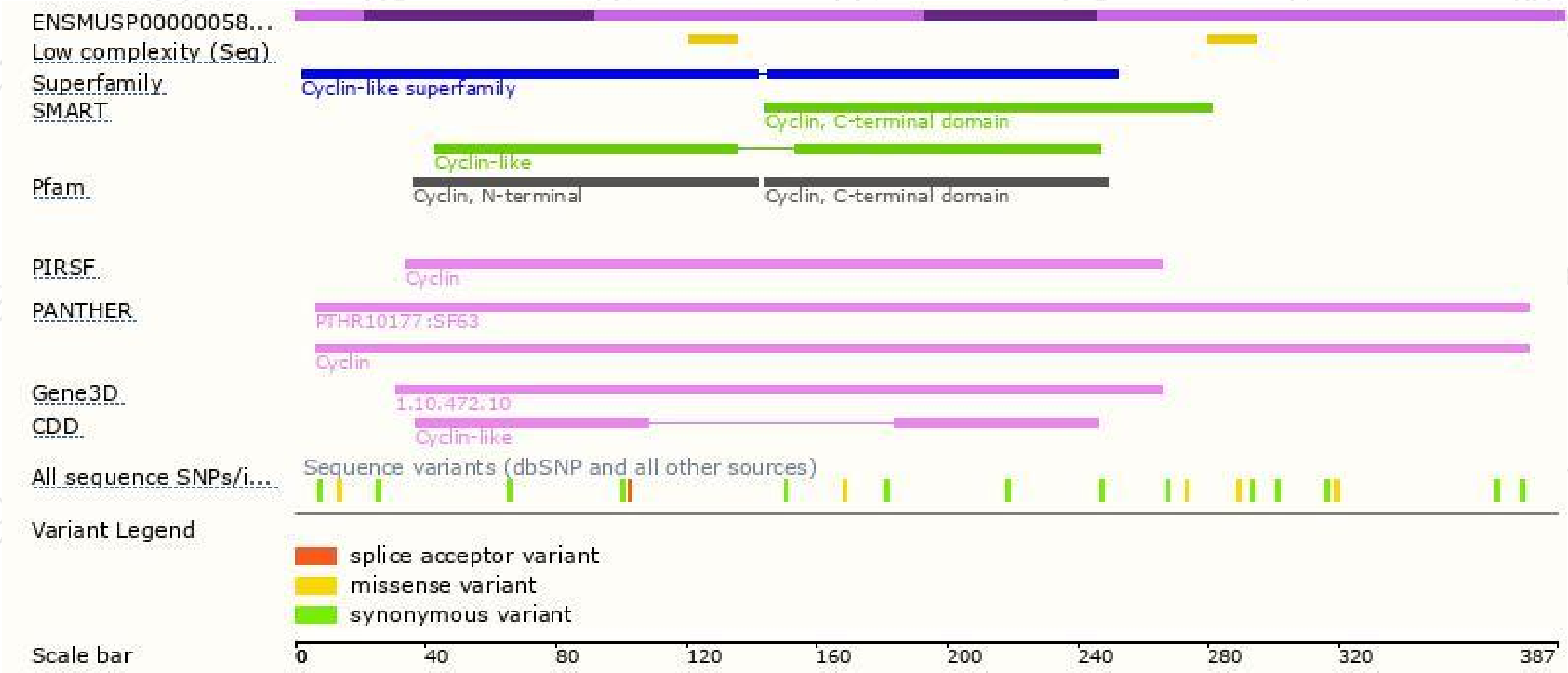
- CTCF
- Enhancer
- Open Chromatin
- Promoter
- Promoter Flank
- Transcription Factor Binding Site

Gene Legend

Protein Coding
- merged Ensembl/Havana

Non-Protein Coding
- processed transcript
- RNA gene

Protein domain



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

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