

C2cd6 Cas9-KO Strategy

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Project Overview

Project Name

C2cd6

Project type

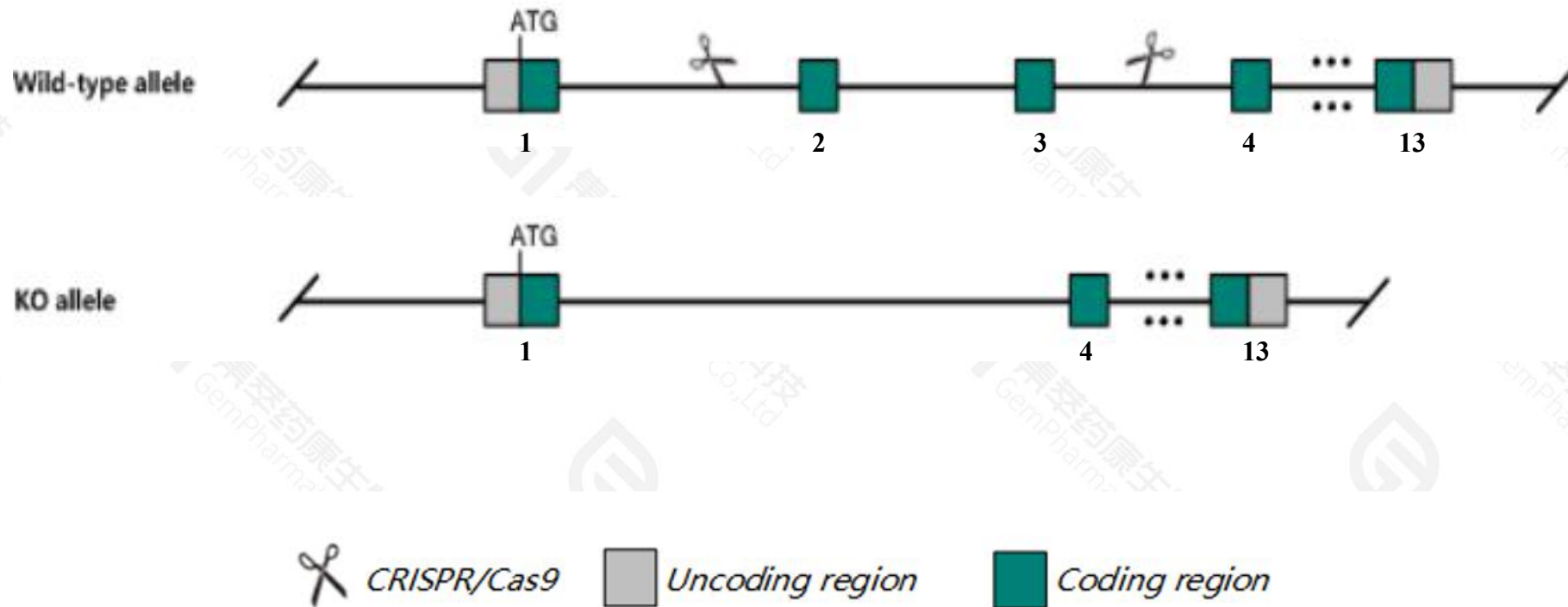
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *C2cd6* gene. The schematic diagram is as follows:



- The *C2cd6* gene has 4 transcripts. According to the structure of *C2cd6* gene, exon2-exon3 of *C2cd6-201*(ENSMUST00000097080.3) transcript is recommended as the knockout region. The region contains 139bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *C2cd6* 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 *C2cd6* gene is located on the Chr1. 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.

C2cd6 C2 calcium dependent domain containing 6 [Mus musculus (house mouse)]

Gene ID: 73463, updated on 13-Mar-2020

Summary



Official Symbol C2cd6 provided by [MGI](#)

Official Full Name C2 calcium dependent domain containing 6 provided by [MGI](#)

Primary source [MGI:MGI:1920713](#)

See related [Ensembl:ENSMUSG00000072295](#)

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 1700052H20Rik, 4930408G06Rik, Als2cr11, Als2cr11b, C2cd6b, Gm33589

Expression Restricted expression toward testis adult (RPKM 30.5)[See more](#)

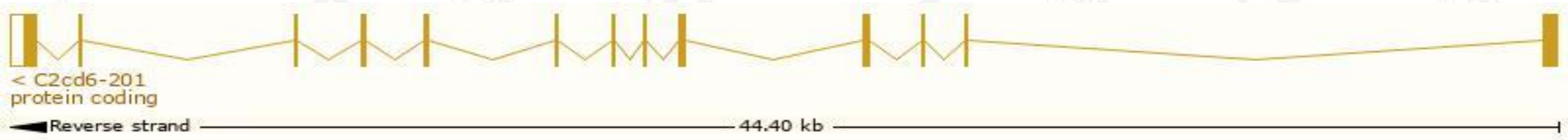
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

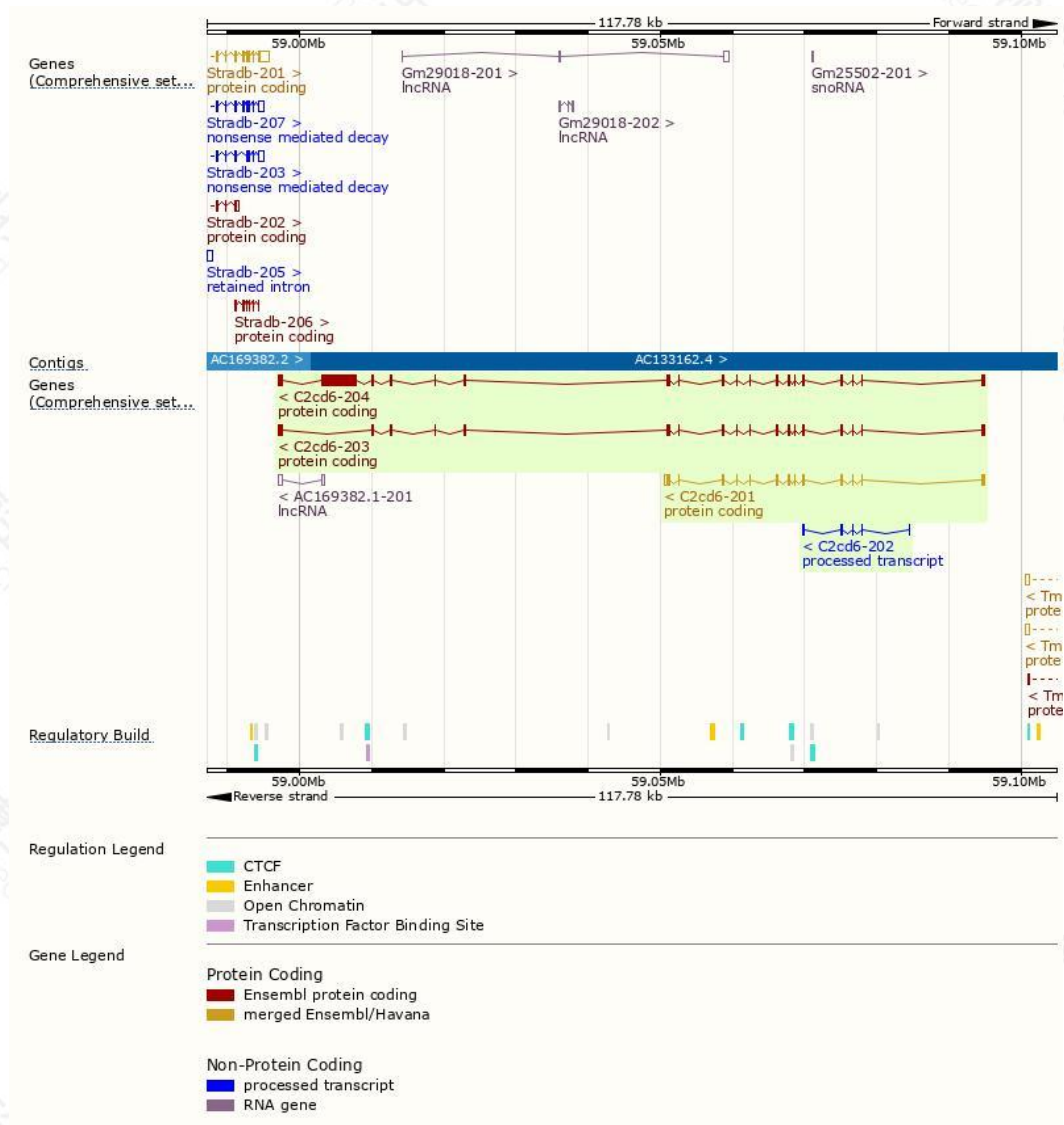
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
C2cd6-201	ENSMUST00000097080.3	2131	557aa	Protein coding	CCDS14982	E9Q152	TSL:2 GENCODE basic APPRIS P2
C2cd6-204	ENSMUST00000238949.1	7029	2282aa	Protein coding	-	-	GENCODE basic APPRIS ALT2
C2cd6-203	ENSMUST00000238601.1	2355	724aa	Protein coding	-	-	GENCODE basic APPRIS ALT2
C2cd6-202	ENSMUST00000149784.1	381	No protein	Processed transcript	-	-	TSL:5

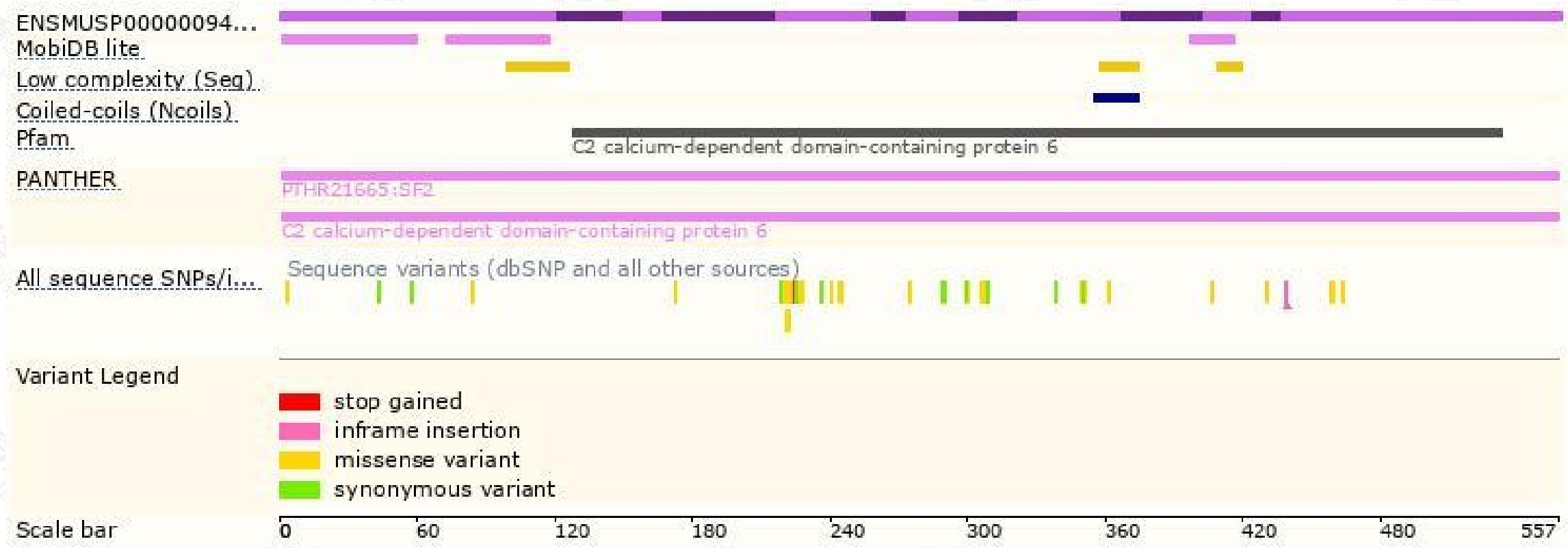
The strategy is based on the design of *C2cd6-201* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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