

Phf21b Cas9-KO Strategy

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Project Overview

Project Name

Phf21b

Project type

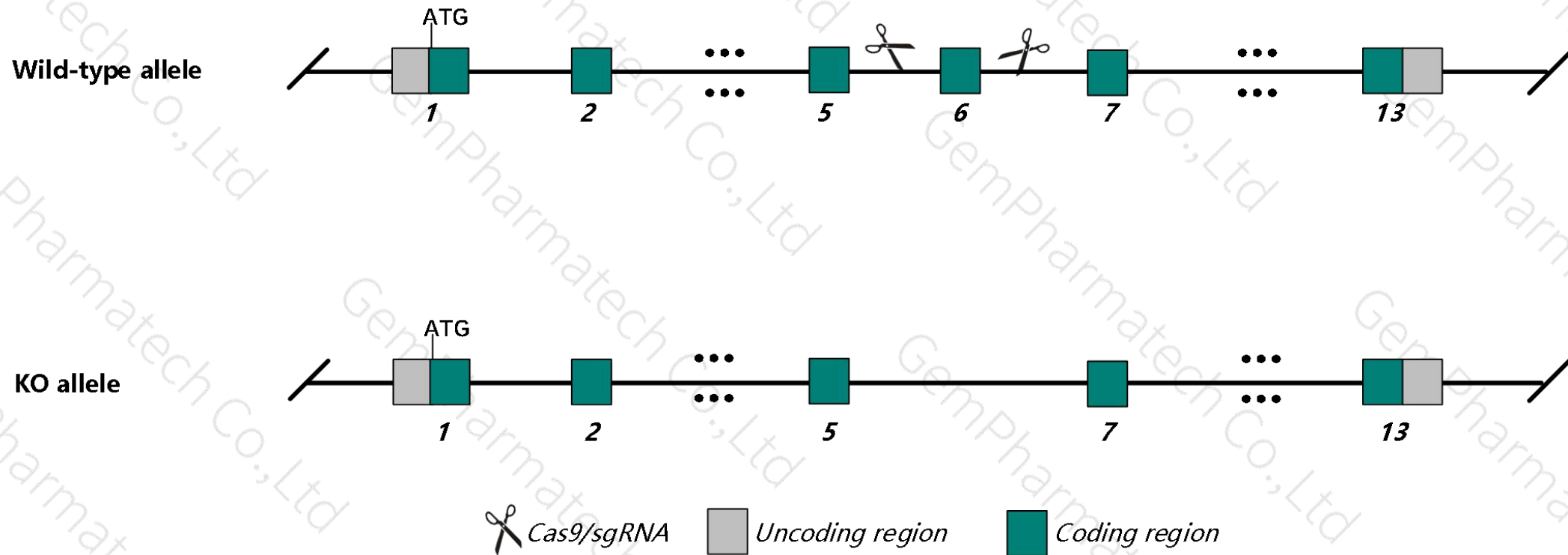
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Phf21b* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Phf21b* gene. The brief process is as follows: sgRNA was transcribed in vitro. Cas9 and sgRNA were microinjected into the fertilized eggs of C57BL/6N 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/6N mice.

- The *Phf21b* gene is located on the Chr15. 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)

Phf21b PHD finger protein 21B [*Mus musculus* (house mouse)]

Gene ID: 271305, updated on 12-Aug-2019

Summary

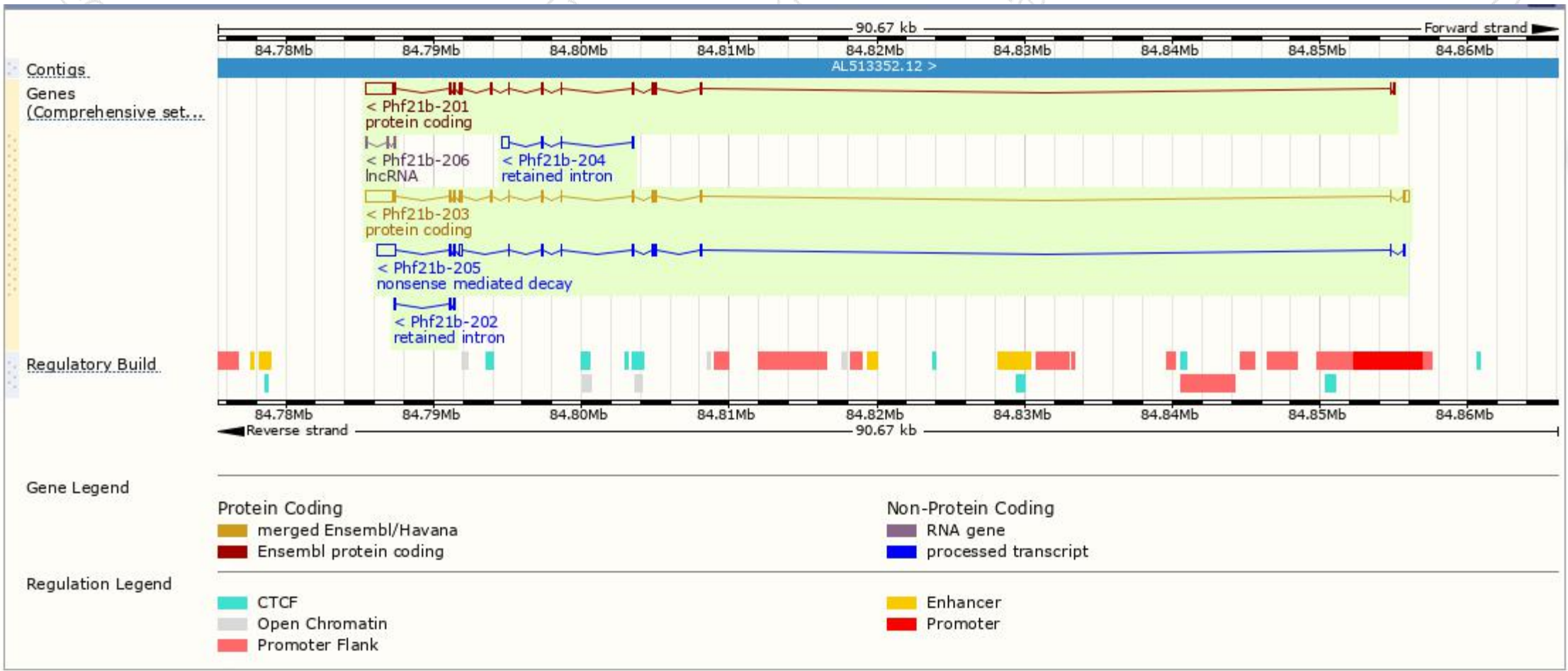
Official Symbol	Phf21b provided by MGI
Official Full Name	PHD finger protein 21B provided by MGI
Primary source	MGI:MGI:2443812
See related	Ensembl:ENSMUSG00000016624
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	A730032D07Rik
Expression	Biased expression in CNS E11.5 (RPKM 19.3), whole brain E14.5 (RPKM 16.1) and 13 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

The gene has 6 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Phf21b-203	ENSMUST00000159939.7	3639	487aa	 Protein coding	CCDS37169	Q8C966	TSL:1 Gencode basic APPRIS P2
Phf21b-201	ENSMUST00000016768.11	3377	475aa	 Protein coding	-	F8WGM2	TSL:1 Gencode basic APPRIS ALT1
Phf21b-205	ENSMUST00000162044.7	2568	294aa	 Nonsense mediated decay	-	E9PVV0	TSL:1
Phf21b-204	ENSMUST00000160389.1	725	No protein	 Retained intron	-	-	TSL:3
Phf21b-202	ENSMUST00000159502.1	324	No protein	 Retained intron	-	-	TSL:2
Phf21b-206	ENSMUST00000162996.1	265	No protein	 lncRNA	-	-	TSL:3

Genomic location distribution



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

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