

Abhd17b Cas9-CKO Strategy

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Project Overview

Project Name

Abhd17b

Project type

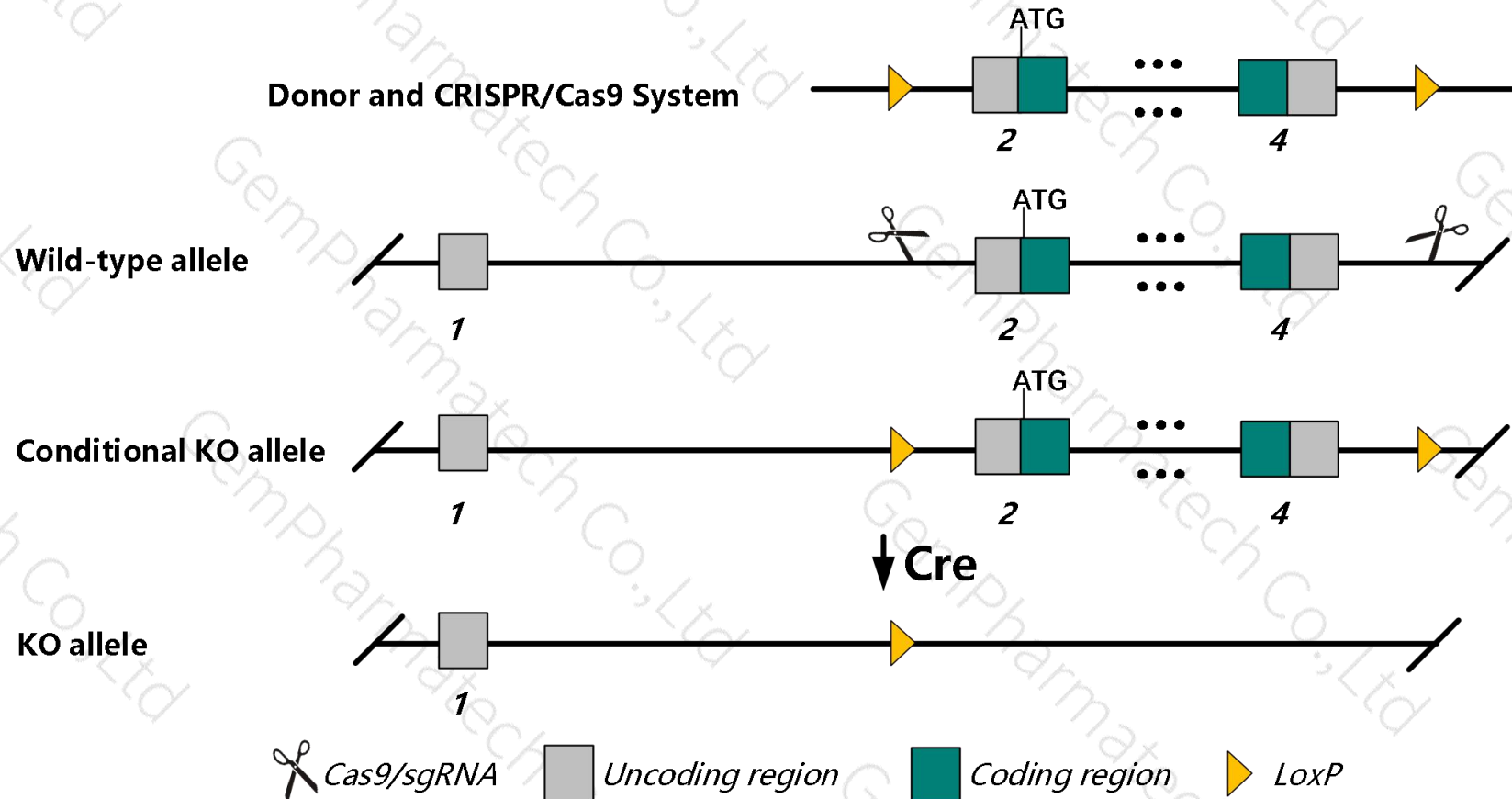
Cas9-CKO

Strain background

C57BL/6JGpt

Conditional Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Abhd17b* gene. The schematic diagram is as follows:



- The *Abhd17b* gene has 3 transcripts. According to the structure of *Abhd17b* gene, exon2-exon4 of *Abhd17b*-201 (ENSMUST00000052556.4) 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 *Abhd17b* gene. The brief process is as follows: CRISPR/Cas9 system and Donor 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 flox mice will be knocked out after mating with mice expressing Cre recombinase, resulting in the loss of function of the target gene in specific tissues and cell types.

Notice

- The *Abhd17b* gene is located on the Chr19. 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 loxp insertion on gene transcription, RNA splicing and protein translation cannot be predicted at existing technological level.

Gene information (NCBI)

Abhd17b abhydrolase domain containing 17B [*Mus musculus* (house mouse)]

Gene ID: 226016, updated on 12-Aug-2019

Summary

Official Symbol Abhd17b provided by [MGI](#)
Official Full Name abhydrolase domain containing 17B provided by [MGI](#)
Primary source [MGI:MGI:1917816](#)
See related [Ensembl:ENSMUSG00000047368](#)
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 Cgi67; Fam108b; Fam108b1; 5730446C15Rik
Expression Ubiquitous expression in testis adult (RPKM 19.0), cerebellum adult (RPKM 9.8) and 28 other tissues [See more](#)
Orthologs [human](#) [all](#)

Genomic context

Location: 19; 19 B

See Abhd17b in [Genome Data Viewer](#)

Exon count: 5

Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	19	NC_000085.6 (21653267..21685638)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	19	NC_000085.5 (21727799..21760127)

Transcript information (Ensembl)

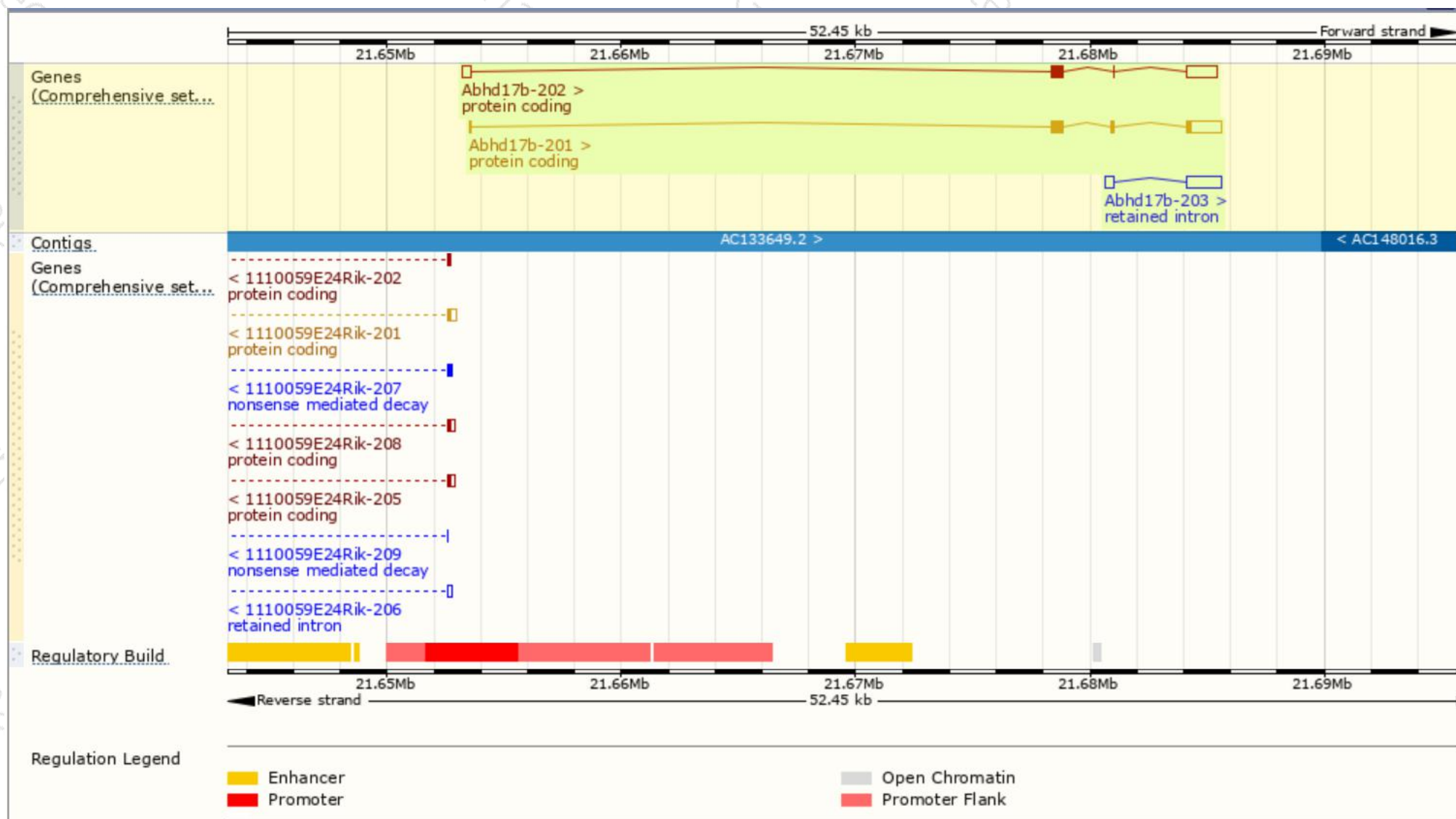
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Abhd17b-201	ENSMUST00000052556.4	2259	288aa	Protein coding	CCDS29700	Q7M759	TSL:5 GENCODE basic APPRIS P1
Abhd17b-202	ENSMUST00000235332.1	2249	162aa	Protein coding	-	-	GENCODE basic
Abhd17b-203	ENSMUST00000236549.1	1954	No protein	Retained intron	-	-	

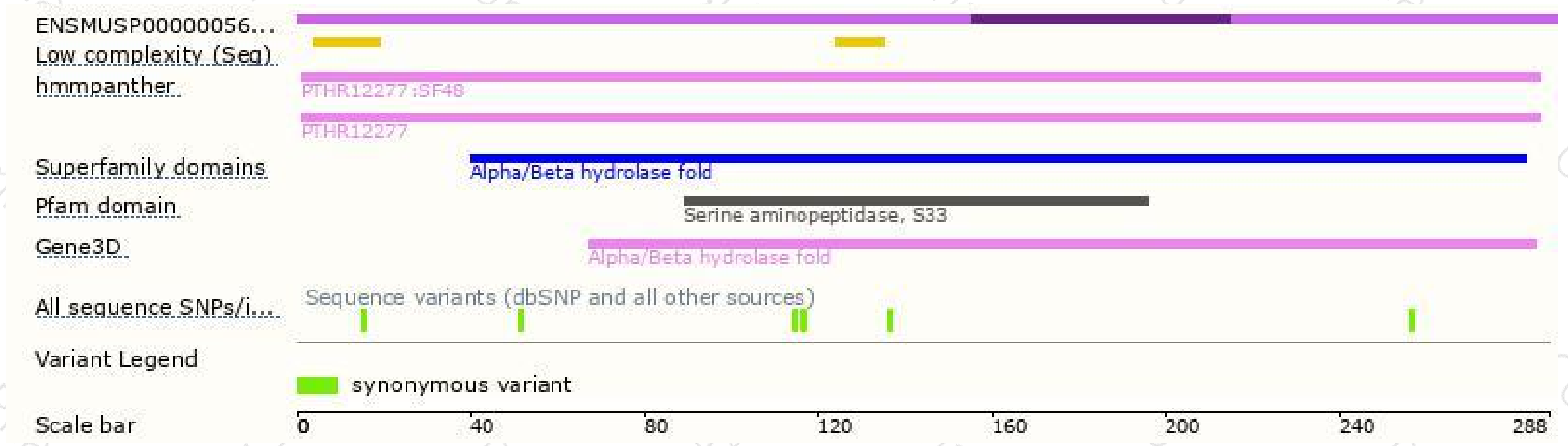
The strategy is based on the design of *Abhd17b-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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