Abhd3 Cas9-KO Strategy

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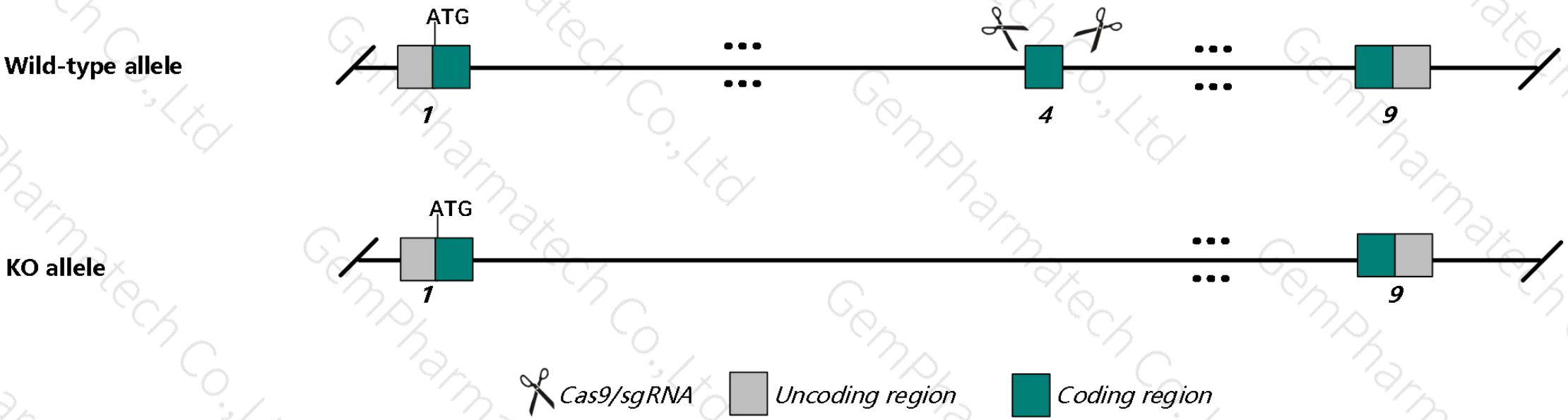
Project Overview

Project Name	***Abhd3***
Project type	**Cas9-KO**
Strain background	**C57BL/6N**

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Abhd3* gene. The schematic diagram is as follows:



Technical routes

- In this project we use CRISPR/Cas9 technology to modify *Abhd3* 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.

Notice

- The *Abhd3* gene is located on the Chr18. 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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Abhd3 abhydrolase domain containing 3 [*Mus musculus* (house mouse)]

Gene ID: 106861, updated on 12-Aug-2019

Summary

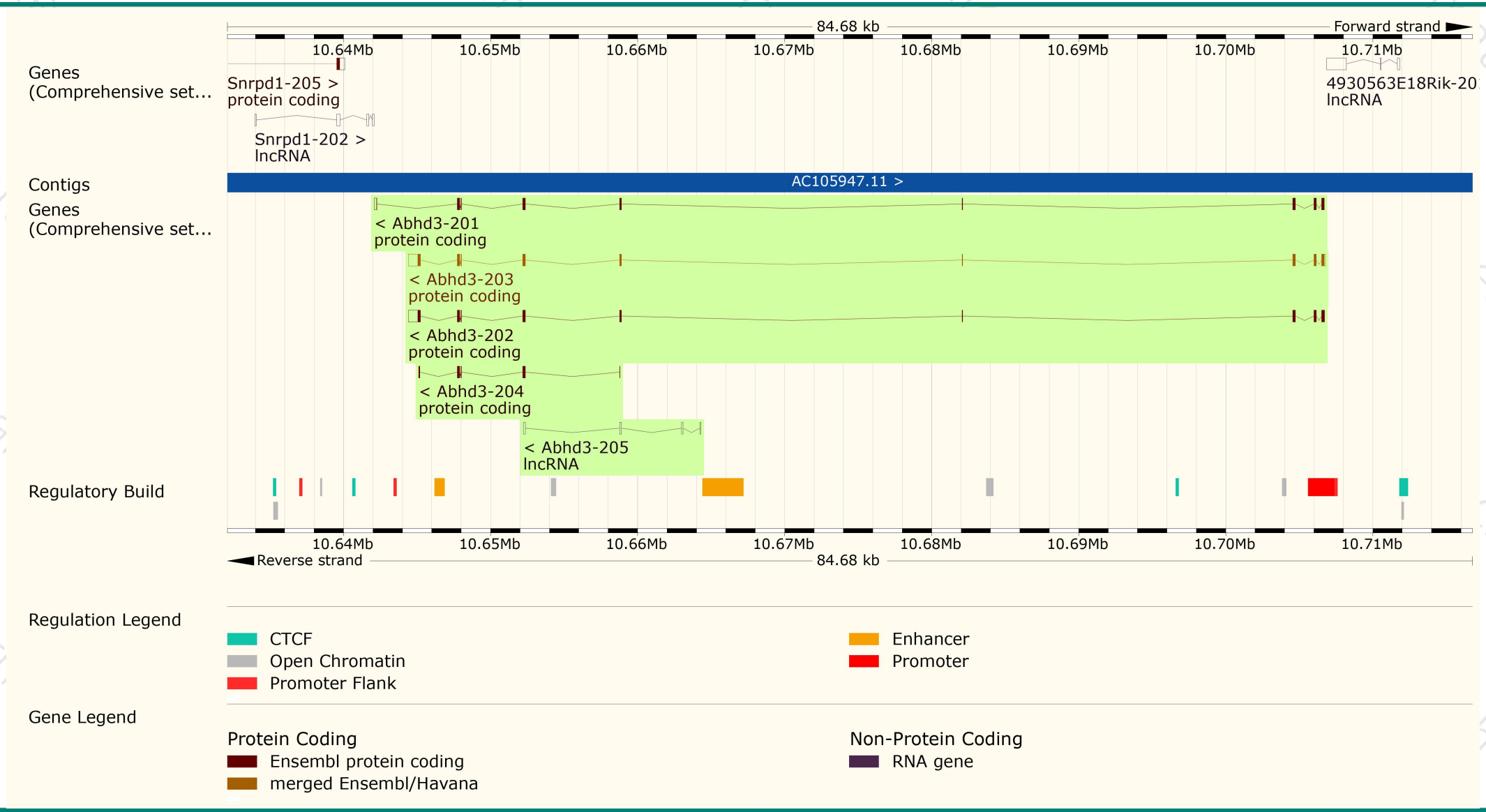
Official Symbol	Abhd3 provided by MGI
Official Full Name	abhydrolase domain containing 3 provided by MGI
Primary source	MGI:MGI:2147183
See related	Ensembl:ENSMUSG00000002475
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	LABH3; AA675331
Expression	Broad expression in cerebellum adult (RPKM 12.2), liver adult (RPKM 11.7) and 20 other tissues See more
Orthologs	human all

Transcript information（Ensembl）

The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Abhd3-203	ENSMUST00000117828.8	1962	411aa	Protein coding	CCDS29057	D3Z6Y2 Q91ZH7	TSL:1 GENCODE basic
Abhd3-202	ENSMUST00000117726.8	1890	407aa	Protein coding	-	D3YU06 Q91ZH7	TSL:1 GENCODE basic APPRIS P1
Abhd3-201	ENSMUST00000002549.8	1247	360aa	Protein coding	-	A0A452J888	TSL:1 GENCODE basic
Abhd3-204	ENSMUST00000144150.8	470	157aa	Protein coding	-	F6RSE8	CDS 5' and 3' incomplete TSL:5
Abhd3-205	ENSMUST00000234419.1	449	No protein	lncRNA	-	-	-

Genomic location distribution



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

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