

Zdhhc1 Cas9-KO Strategy

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Project Overview

Project Name

Zdhhc1

Project type

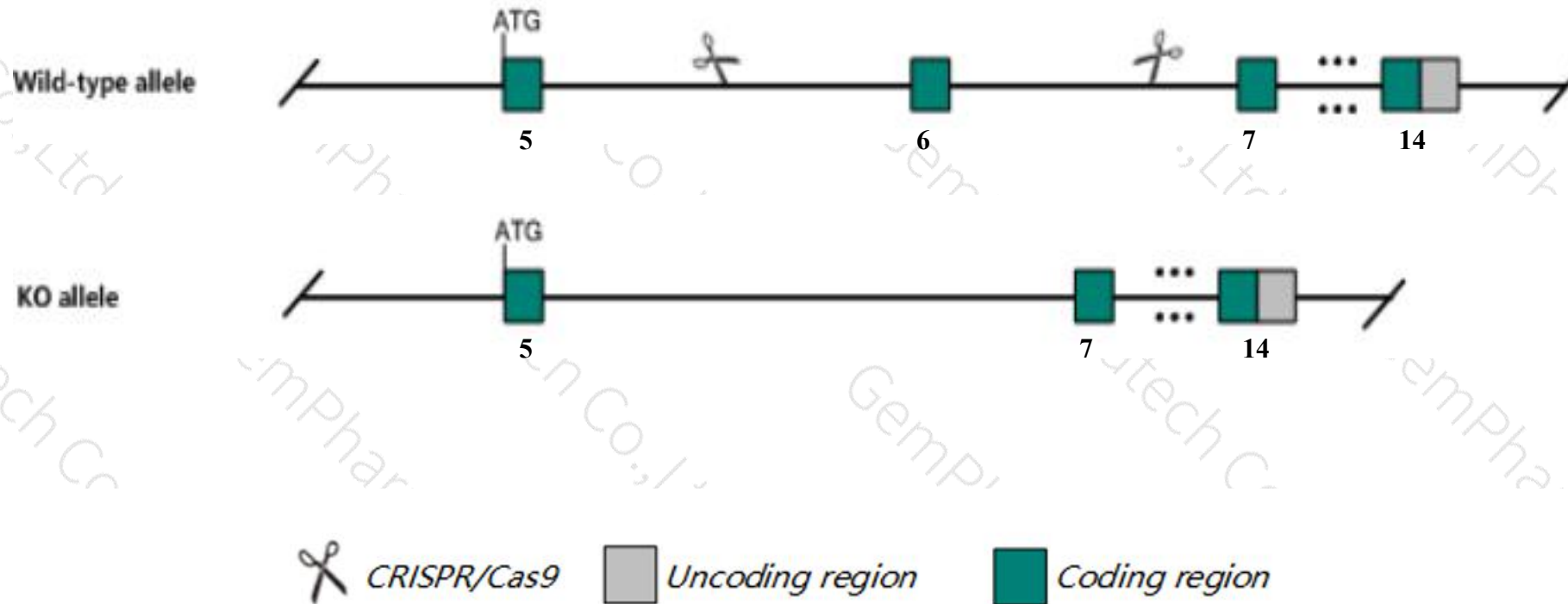
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zdhhc1* gene. The schematic diagram is as follows:



- The *Zdhhc1* gene has 4 transcripts. According to the structure of *Zdhhc1* gene, exon6 of *Zdhhc1-203* (ENSMUST00000212303.1) transcript is recommended as the knockout region. The region contains 176bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Zdhhc1* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Zdhhc1* gene is located on the Chr8. 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)

Zdhhc1 zinc finger, DHHC domain containing 1 [Mus musculus (house mouse)]

Gene ID: 70796, updated on 19-Mar-2020

Summary



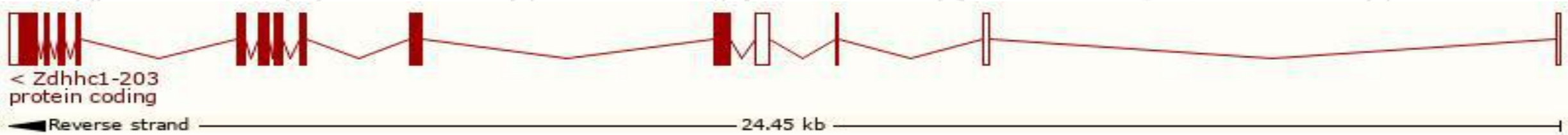
Official Symbol	Zdhhc1 provided by MGI
Official Full Name	zinc finger, DHHC domain containing 1 provided by MGI
Primary source	MGI:MGI:1918046
See related	Ensembl:ENSMUSG00000039199
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	4432412D04Rik, DHHC-1
Expression	Ubiquitous expression in lung adult (RPKM 28.6), ovary adult (RPKM 27.7) and 24 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

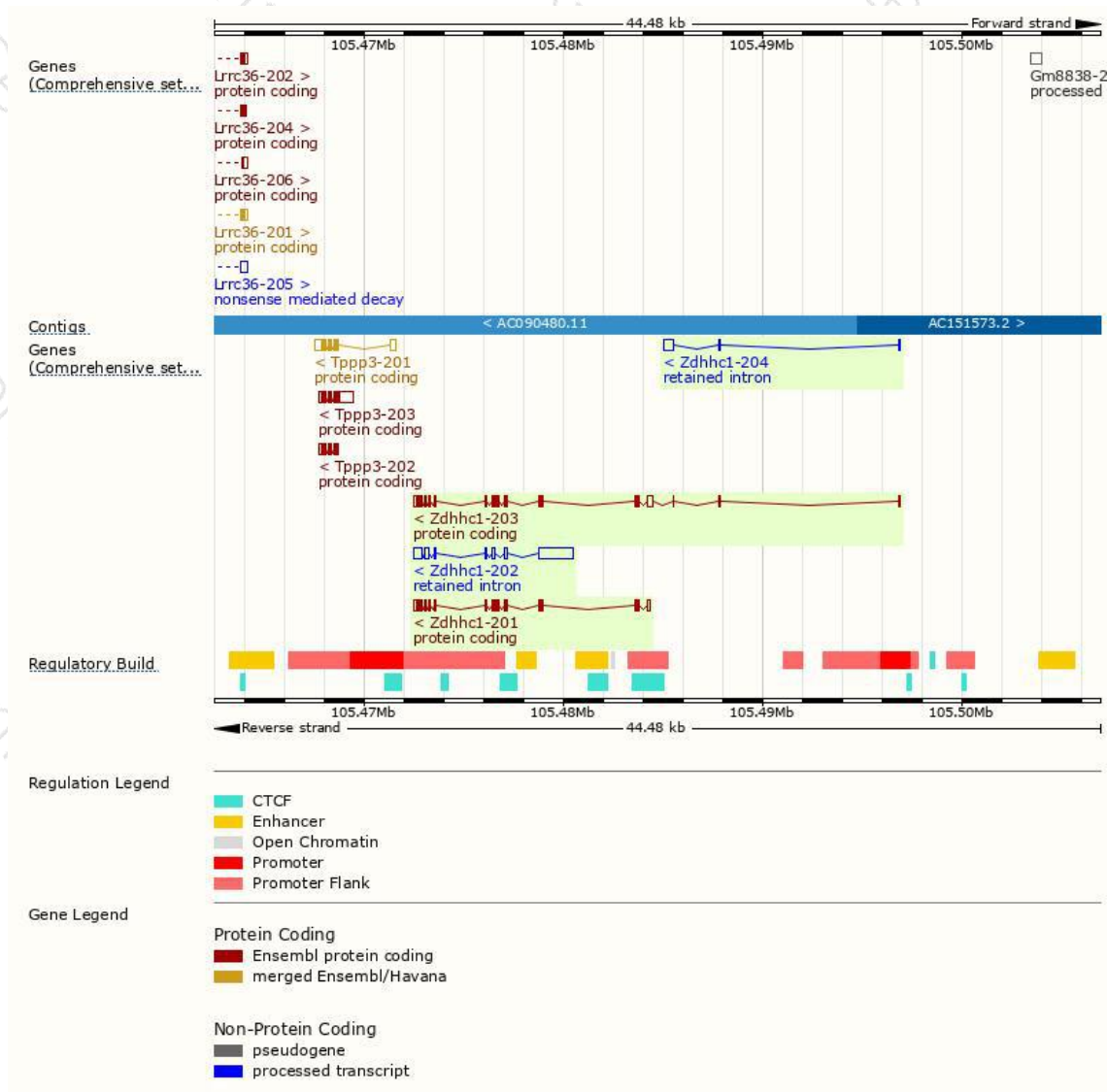
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zdhhc1-203	ENSMUST00000212303.1	2056	484aa	Protein coding	CCDS22603	Q8R0N9	TSL:1 GENCODE basic APPRIS is a system to annotate alternatively spliced transcripts based on a range of computational methods to identify the most functionally important transcript(s) of a gene. APPRIS P1
Zdhhc1-201	ENSMUST00000044286.5	1737	484aa	Protein coding	CCDS22603	Q8R0N9	TSL:1 GENCODE basic APPRIS is a system to annotate alternatively spliced transcripts based on a range of computational methods to identify the most functionally important transcript(s) of a gene. APPRIS P1
Zdhhc1-202	ENSMUST00000212109.1	2874	No protein	Retained intron	-	-	TSL:1
Zdhhc1-204	ENSMUST00000212538.1	677	No protein	Retained intron	-	-	TSL:2

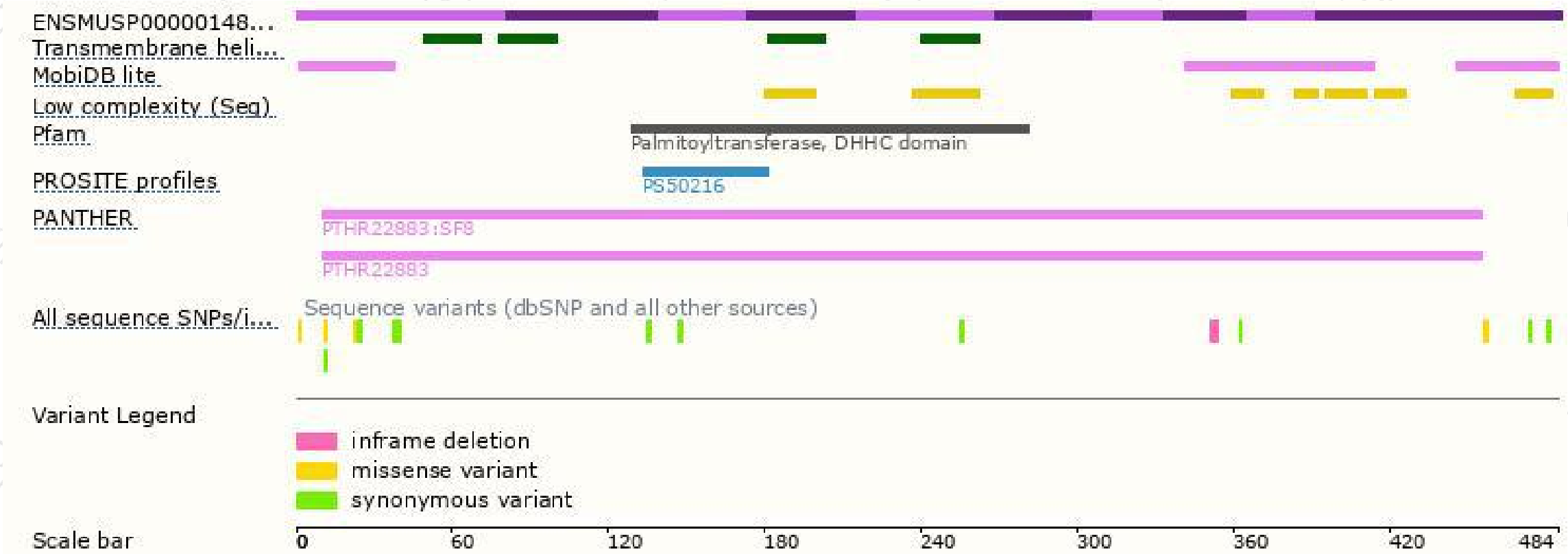
The strategy is based on the design of *Zdhhc1-203* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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

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