

Zdhhc4 Cas9-KO Strategy

Designer:

Huan Fan

Reviewer:

Huan Wang

Design Date:

2019-12-11

Project Overview

Project Name

Zdhhc4

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zdhhc4* gene. The schematic diagram is as follows:



- The *Zdhhc4* gene has 13 transcripts. According to the structure of *Zdhhc4* gene, exon4-exon5 of *Zdhhc4-201* (ENSMUST00000001900.8) transcript is recommended as the knockout region. The region contains 253bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Zdhhc4* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Zdhhc4* gene is located on the Chr5. 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)

Zdhhc4 zinc finger, DHHC domain containing 4 [Mus musculus (house mouse)]

Gene ID: 72881, updated on 31-Jan-2019

Summary



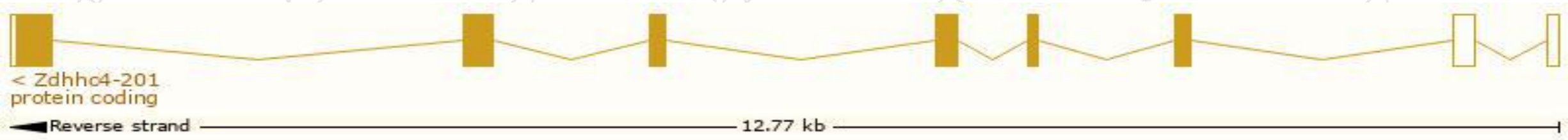
Official Symbol	Zdhhc4 provided by MGI
Official Full Name	zinc finger, DHHC domain containing 4 provided by MGI
Primary source	MGI:MGI:1920131
See related	Ensembl:ENSMUSG000000001844
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	1810021D01Rik, 2900029I10Rik, DHHC-4
Expression	Ubiquitous expression in testis adult (RPKM 86.6), genital fat pad adult (RPKM 21.9) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

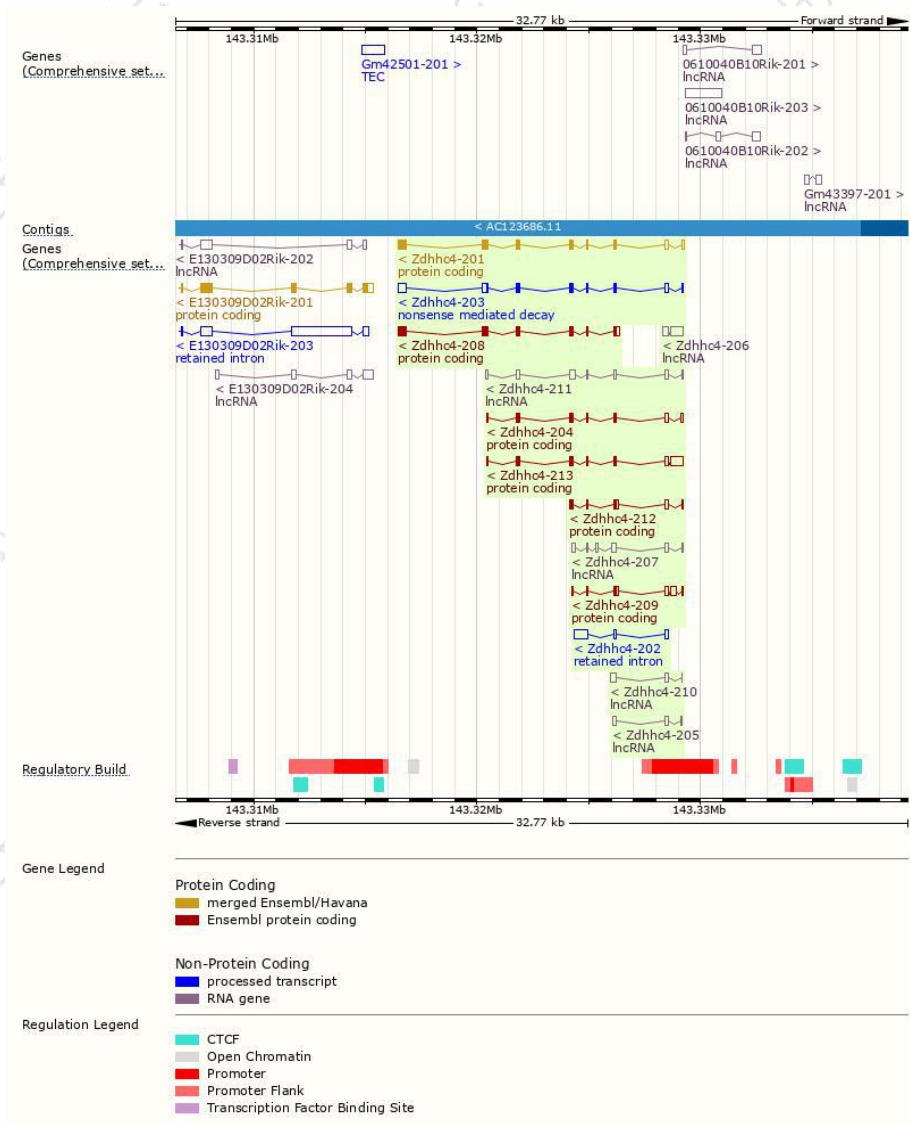
The gene has 13 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zdhhc4-201	ENSMUST00000001900.8	1364	343aa	Protein coding	CCDS19840	Q9D6H5	TSL:1 GENCODE basic APPRIS P1
Zdhhc4-208	ENSMUST00000161915.7	1216	343aa	Protein coding	CCDS19840	Q9D6H5	TSL:5 GENCODE basic APPRIS P1
Zdhhc4-213	ENSMUST00000162941.7	1254	176aa	Protein coding	-	E0CX22	CDS 3' incomplete TSL:5
Zdhhc4-204	ENSMUST00000159941.7	848	178aa	Protein coding	-	E0CYN6	CDS 3' incomplete TSL:5
Zdhhc4-209	ENSMUST00000162066.7	820	89aa	Protein coding	-	E0CXP7	CDS 3' incomplete TSL:5
Zdhhc4-212	ENSMUST00000162358.7	703	123aa	Protein coding	-	E0CY85	CDS 3' incomplete TSL:5
Zdhhc4-203	ENSMUST00000159813.7	1341	186aa	Nonsense mediated decay	-	M0QWP4	TSL:1
Zdhhc4-202	ENSMUST00000159718.1	930	No protein	Retained intron	-	-	TSL:2
Zdhhc4-211	ENSMUST00000162287.7	912	No protein	lncRNA	-	-	TSL:5
Zdhhc4-206	ENSMUST00000161199.1	801	No protein	lncRNA	-	-	TSL:3
Zdhhc4-207	ENSMUST00000161333.7	793	No protein	lncRNA	-	-	TSL:5
Zdhhc4-205	ENSMUST00000160061.1	442	No protein	lncRNA	-	-	TSL:2
Zdhhc4-210	ENSMUST00000162284.7	435	No protein	lncRNA	-	-	TSL:2

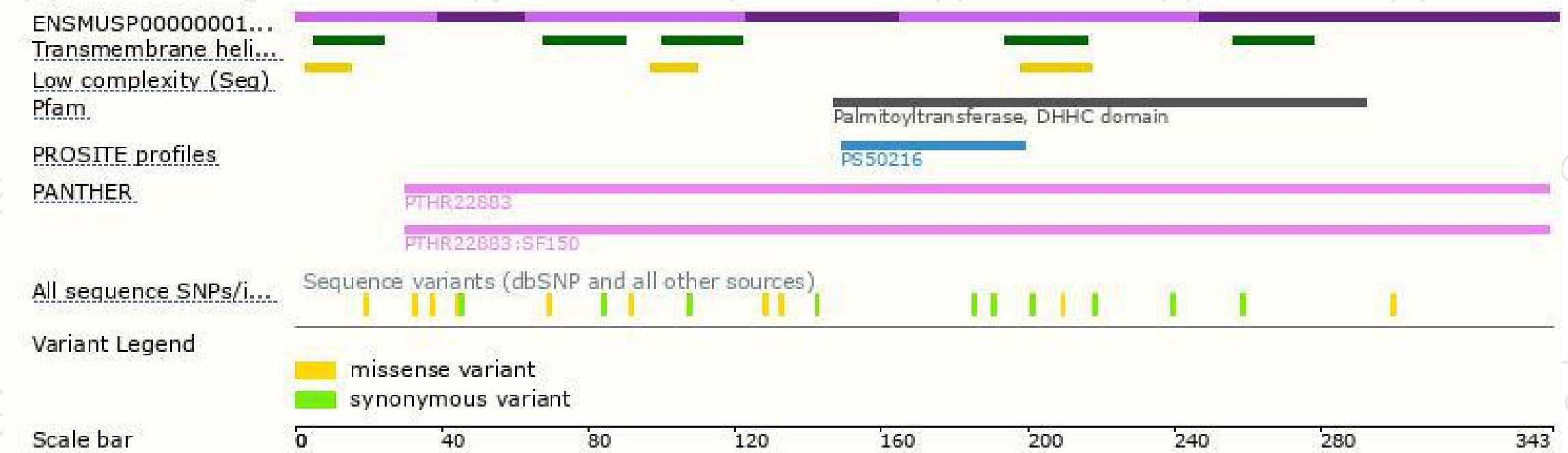
The strategy is based on the design of *Zdhhc4-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

