

# ***Haus8 Cas9-KO Strategy***

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# Project Overview

**Project Name**

*Haus8*

**Project type**

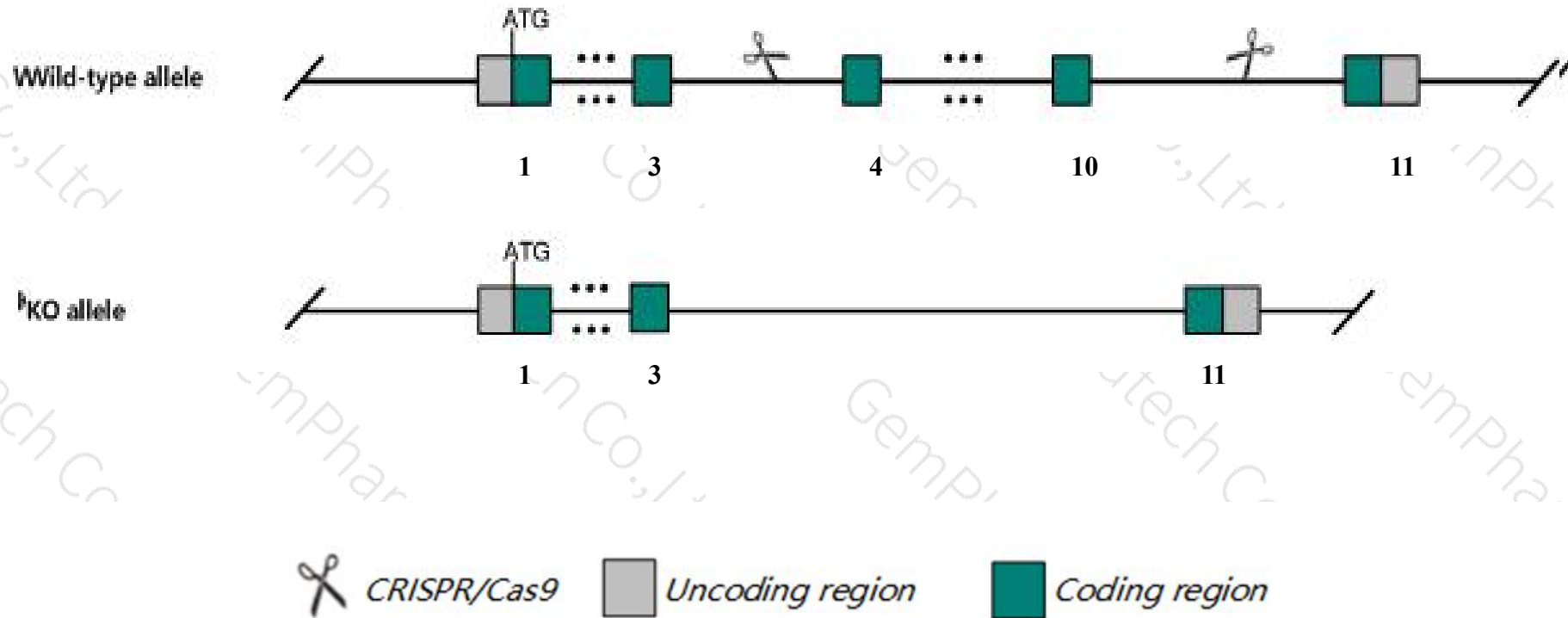
**Cas9-KO**

**Strain background**

**C57BL/6JGpt**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Haus8* gene. The schematic diagram is as follows:



- The *Haus8* gene has 8 transcripts. According to the structure of *Haus8* gene, exon4-exon10 of *Haus8-201* (ENSMUST00000035960.12) transcript is recommended as the knockout region. The region contains 830bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Haus8* gene. The brief process is as follows: CRISPR/Cas9 system

- Transcript *Haus8-204* may be unaffected.
- The *Haus8* 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 gene transcription and translation processes, all risks cannot be predicted under existing information.



# Gene information (NCBI)

## Haus8 4HAUS augmin-like complex, subunit 8 [Mus musculus (house mouse)]

Gene ID: 76478, updated on 31-Jan-2019

### Summary



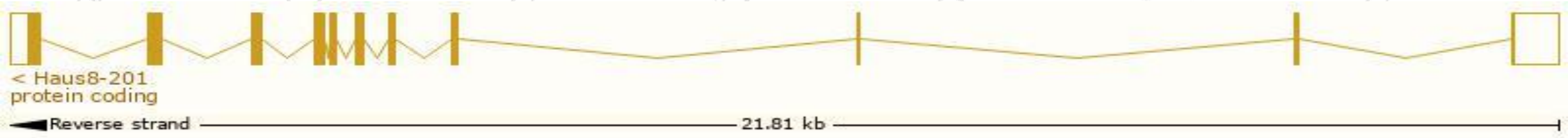
<b>Official Symbol</b>	Haus8 provided by <a href="#">MGI</a>
<b>Official Full Name</b>	4HAUS augmin-like complex, subunit 8 provided by <a href="#">MGI</a>
<b>Primary source</b>	<a href="#">MGI:MGI:1923728</a>
<b>See related</b>	<a href="#">Ensembl:ENSMUSG000000035439</a>
<b>Gene type</b>	protein coding
<b>RefSeq status</b>	VALIDATED
<b>Organism</b>	<a href="#">Mus musculus</a>
<b>Lineage</b>	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
<b>Also known as</b>	2410004L22Rik, Hice1
<b>Expression</b>	Ubiquitous expression in liver E14 (RPKM 13.3), liver E14.5 (RPKM 11.9) and 28 other tissues <a href="#">See more</a>
<b>Orthologs</b>	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

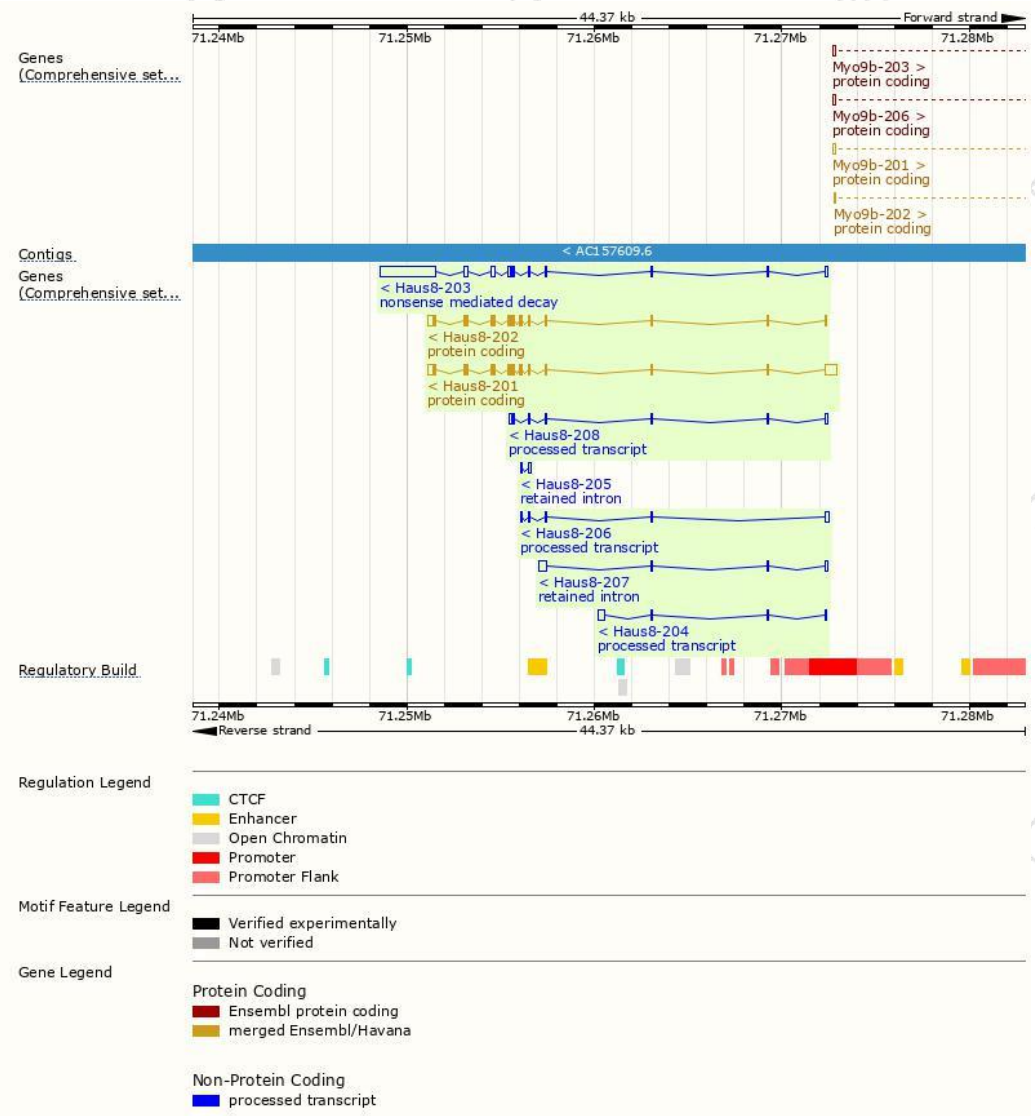
The gene has 8 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Haus8-201	<a href="#">ENSMUST00000035960.12</a>	2013	<a href="#">373aa</a>	Protein coding	<a href="#">CCDS52579</a>	<a href="#">Q99L00</a>	TSL:1 GENCODE basic APPRIS ALT2
Haus8-202	<a href="#">ENSMUST00000110071.2</a>	1452	<a href="#">372aa</a>	Protein coding	<a href="#">CCDS22389</a>	<a href="#">Q99L00</a>	TSL:1 GENCODE basic APPRIS P3
Haus8-203	<a href="#">ENSMUST00000123495.7</a>	3987	<a href="#">144aa</a>	Nonsense mediated decay	-	<a href="#">D6RCV2</a>	TSL:5
Haus8-208	<a href="#">ENSMUST00000157039.7</a>	644	No protein	Processed transcript	-	-	TSL:3
Haus8-204	<a href="#">ENSMUST00000128833.1</a>	471	No protein	Processed transcript	-	-	TSL:3
Haus8-206	<a href="#">ENSMUST00000134361.7</a>	470	No protein	Processed transcript	-	-	TSL:2
Haus8-207	<a href="#">ENSMUST00000144726.7</a>	659	No protein	Retained intron	-	-	TSL:3
Haus8-205	<a href="#">ENSMUST00000129455.1</a>	278	No protein	Retained intron	-	-	TSL:5

The strategy is based on the design of *Haus8-201* transcript,The transcription is shown below

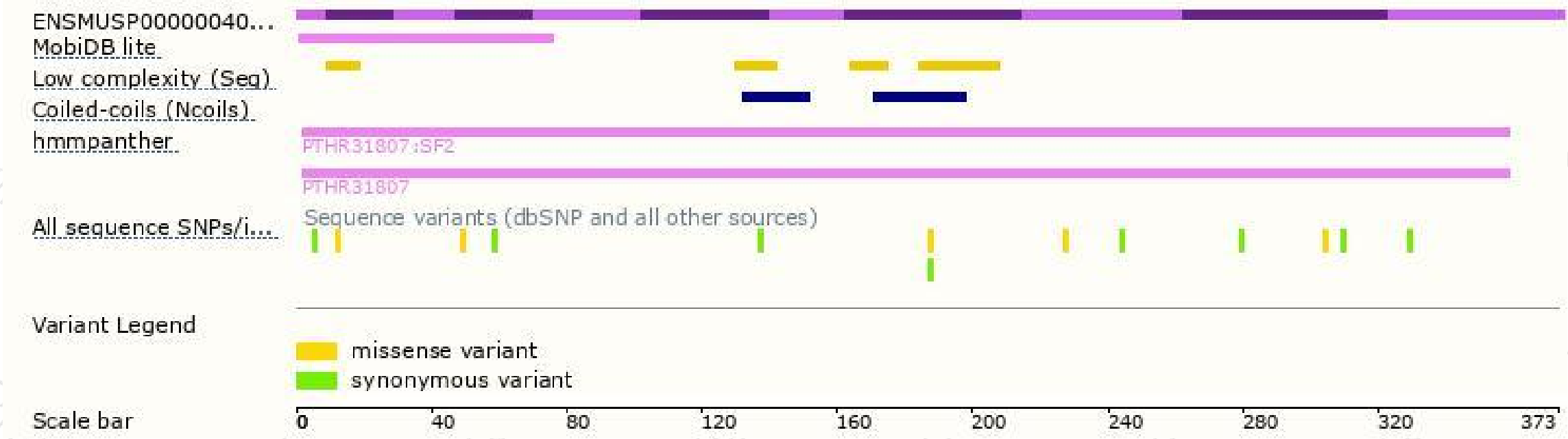


# Genomic location distribution





# Protein domain



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

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