

# ***Zbtb38* Cas9-KO Strategy**

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# Project Overview

**Project Name**

***Zbtb38***

**Project type**

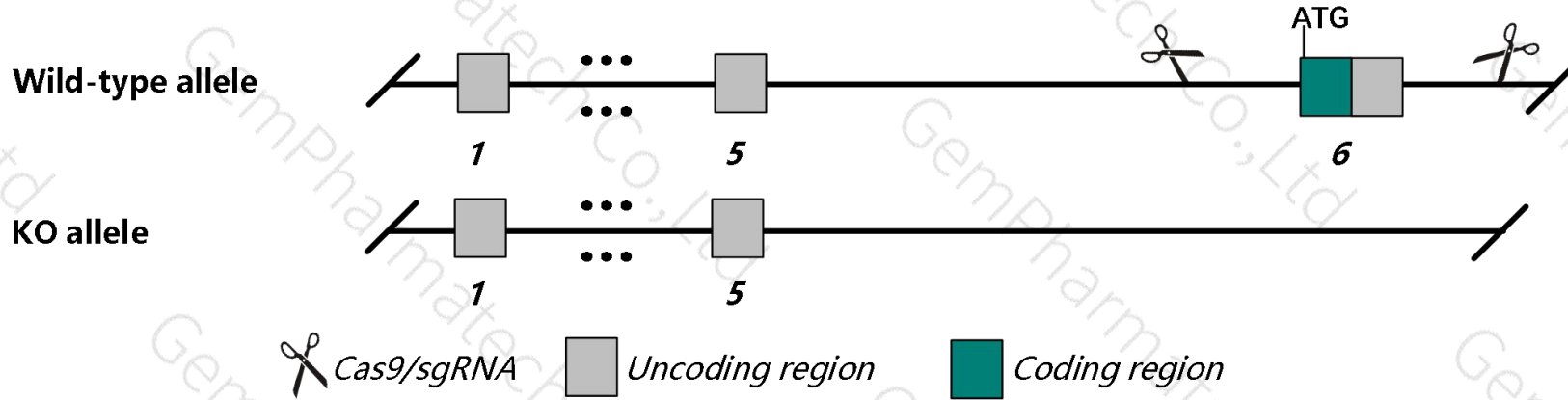
**Cas9-KO**

**Strain background**

**C57BL/6JGpt**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zbtb38* gene. The schematic diagram is as follows:



- The *Zbtb38* gene has 12 transcripts. According to the structure of *Zbtb38* gene, exon6 of *Zbtb38-212* (ENSMUST00000152594.7) 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 *Zbtb38* gene. The brief process is as follows: CRISPR/Cas9 system

- Transcript *Zbtb38*-202&205&206&207&209&211 may not be affected.
- The effect on transcript *Zbtb38*-204&208 is unknown.
- The *Zbtb38* gene is located on the Chr9. 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)

## Zbtb38 zinc finger and BTB domain containing 38 [Mus musculus (house mouse)]

Gene ID: 245007, updated on 31-Jan-2019

### Summary



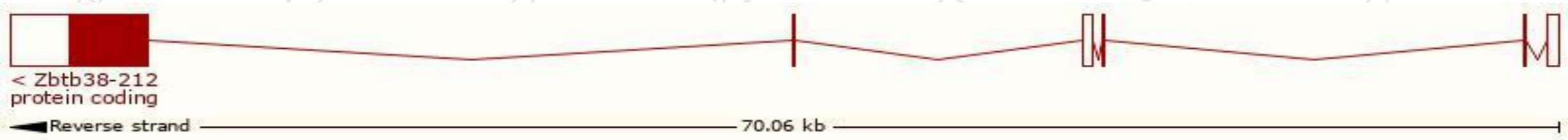
<b>Official Symbol</b>	Zbtb38 provided by <a href="#">MGI</a>
<b>Official Full Name</b>	zinc finger and BTB domain containing 38 provided by <a href="#">MGI</a>
<b>Primary source</b>	<a href="#">MGI:MGI:2442866</a>
<b>See related</b>	<a href="#">Ensembl:ENSMUSG00000040433</a>
<b>Gene type</b>	protein 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>	A930014K01Rik, CIBZ
<b>Expression</b>	Ubiquitous expression in adrenal adult (RPKM 2.7), ovary adult (RPKM 2.1) and 27 other tissues <a href="#">See more</a>
<b>Orthologs</b>	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

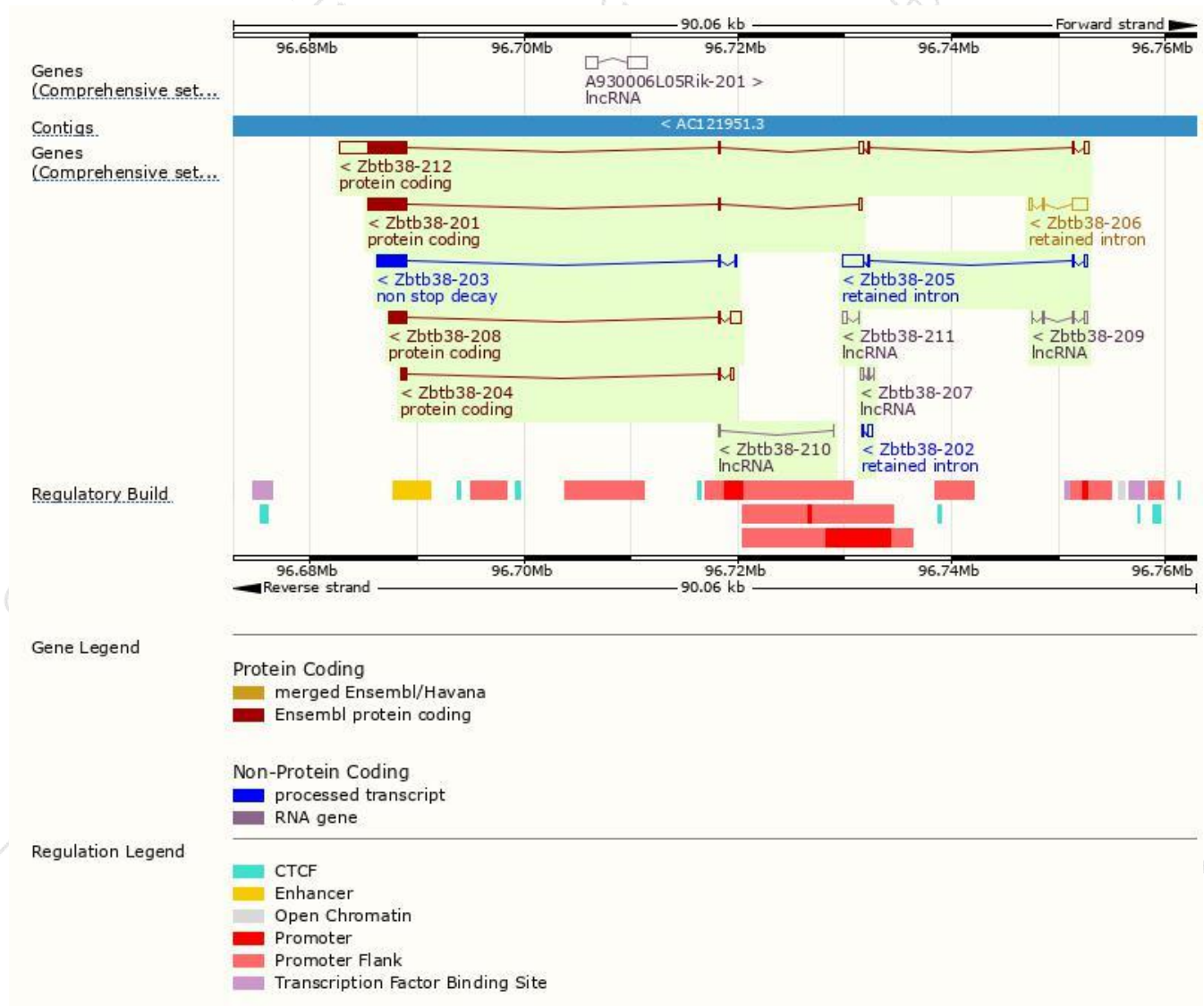
The gene has 12 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zbtb38-212	<a href="#">ENSMUST00000152594.7</a>	7406	<a href="#">1197aa</a>	Protein coding	<a href="#">CCDS40731</a>	<a href="#">Q3LR78</a>	TSL:2 GENCODE basic APPRIS P1
Zbtb38-201	<a href="#">ENSMUST00000093798.8</a>	4091	<a href="#">1197aa</a>	Protein coding	<a href="#">CCDS40731</a>	<a href="#">Q3LR78</a>	TSL:2 GENCODE basic APPRIS P1
Zbtb38-208	<a href="#">ENSMUST00000140121.7</a>	2673	<a href="#">544aa</a>	Protein coding	-	<a href="#">Q8BW24</a>	CDS 3' incomplete TSL:1
Zbtb38-204	<a href="#">ENSMUST00000128269.7</a>	929	<a href="#">184aa</a>	Protein coding	-	<a href="#">D3Z1Y7</a>	CDS 3' incomplete TSL:3
Zbtb38-203	<a href="#">ENSMUST00000126066.7</a>	2937	<a href="#">924aa</a>	Non stop decay	-	<a href="#">F6Z595</a>	TSL:1
Zbtb38-205	<a href="#">ENSMUST00000130078.7</a>	2341	No protein	Retained intron	-	-	TSL:1
Zbtb38-206	<a href="#">ENSMUST00000132060.7</a>	1799	No protein	Retained intron	-	-	TSL:1
Zbtb38-202	<a href="#">ENSMUST00000124186.1</a>	609	No protein	Retained intron	-	-	TSL:2
Zbtb38-209	<a href="#">ENSMUST00000143403.1</a>	566	No protein	lncRNA	-	-	TSL:3
Zbtb38-211	<a href="#">ENSMUST00000147314.1</a>	469	No protein	lncRNA	-	-	TSL:3
Zbtb38-207	<a href="#">ENSMUST00000137858.1</a>	440	No protein	lncRNA	-	-	TSL:3
Zbtb38-210	<a href="#">ENSMUST00000143906.1</a>	155	No protein	lncRNA	-	-	TSL:5

The strategy is based on the design of *Zbtb38-212* 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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