

# ***Dcaf15*** Cas9-KO Strategy

Designer:

# Project Overview

**Project Name**

***Dcaf15***

**Project type**

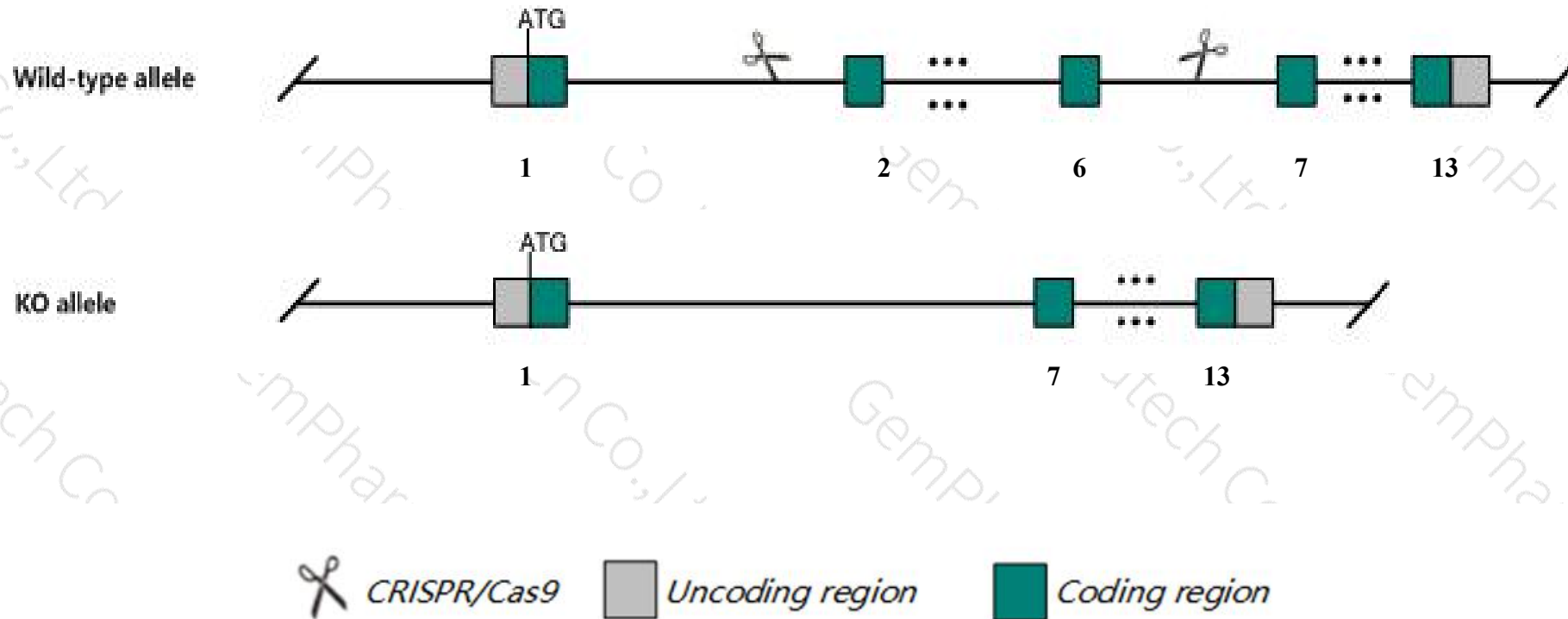
**Cas9-KO**

**Strain background**

**C57BL/6JGpt**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Dcaf15* gene. The schematic diagram is as follows:



- The *Dcaf15* gene has 3 transcripts. According to the structure of *Dcaf15* gene, exon2-exon6 of *Dcaf15-201* (ENSMUST00000041367.8) transcript is recommended as the knockout region. The region contains 652bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Dcaf15* gene. The brief process is as follows: CRISPR/Cas9 system

# Notice

- The *Dcaf15* 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)

## Dcaf15 DDB1 and CUL4 associated factor 15 [Mus musculus (house mouse)]

Gene ID: 212123, updated on 31-Jan-2019

### Summary



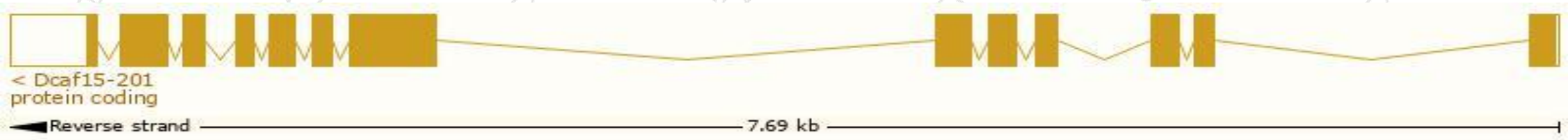
<b>Official Symbol</b>	Dcaf15 provided by <a href="#">MGI</a>
<b>Official Full Name</b>	DDB1 and CUL4 associated factor 15 provided by <a href="#">MGI</a>
<b>Primary source</b>	<a href="#">MGI:MGI:2684420</a>
<b>See related</b>	<a href="#">Ensembl:ENSMUSG000000037103</a>
<b>Gene type</b>	protein coding
<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>	6720484B16
<b>Expression</b>	Ubiquitous expression in testis adult (RPKM 77.9), thymus adult (RPKM 65.5) and 28 other tissues <a href="#">See more</a>
<b>Orthologs</b>	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

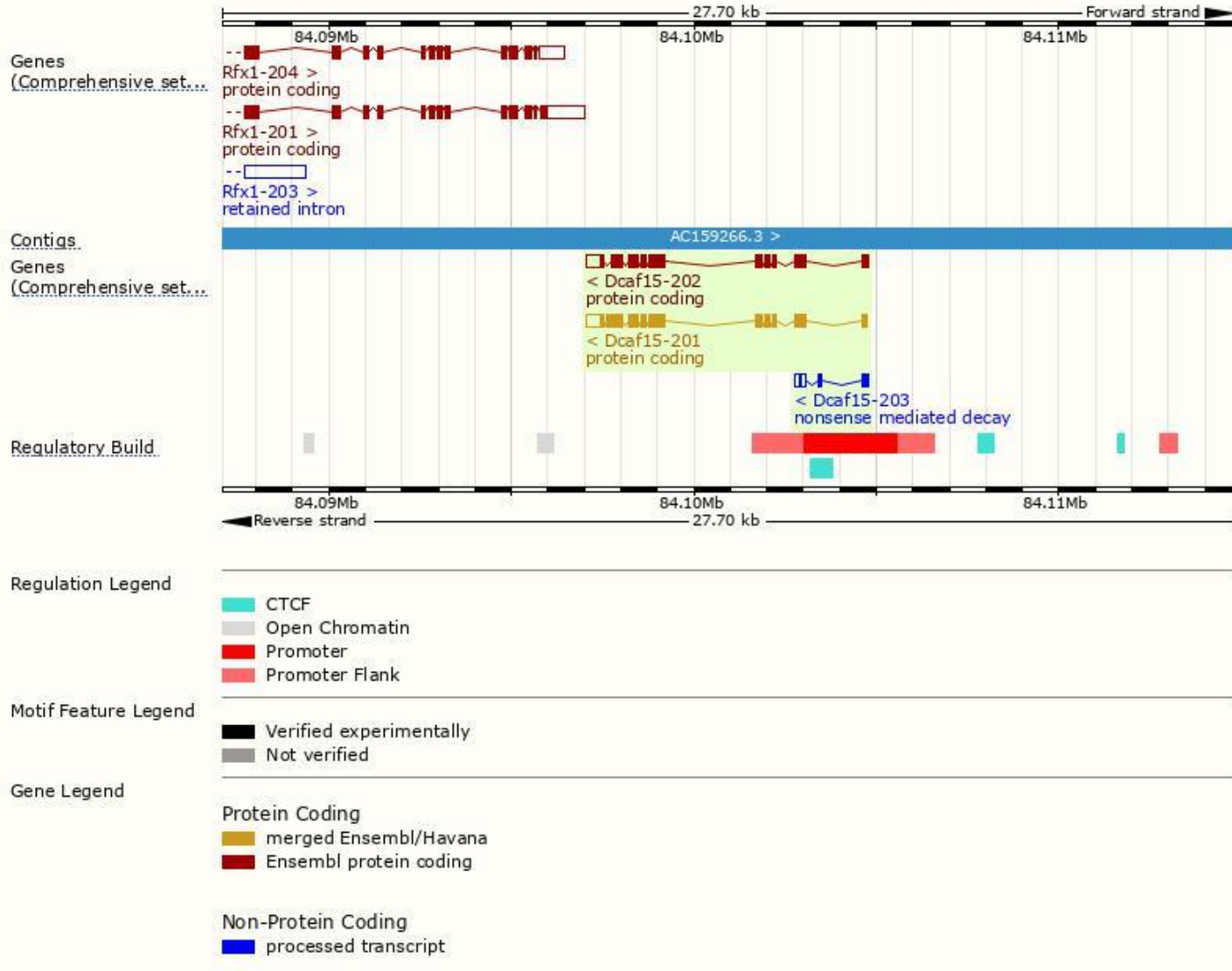
The gene has 3 transcript,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Dcaf15-201	<a href="#">ENSMUST00000041367.8</a>	2312	<a href="#">638aa</a>	Protein coding	<a href="#">CCDS40406</a>	<a href="#">Q6PFH3</a>	TSL:1 GENCODE basic
Dcaf15-202	<a href="#">ENSMUST00000210279.1</a>	2199	<a href="#">600aa</a>	Protein coding	-	<a href="#">Q6PFH3</a>	TSL:1 GENCODE basic APPRIS P1
Dcaf15-203	<a href="#">ENSMUST00000210625.1</a>	432	<a href="#">51aa</a>	Nonsense mediated decay	-	<a href="#">A0A1B0GRT7</a>	TSL:2

The strategy is based on the design of *Dcaf15-201* transcript,The transcription is shown below

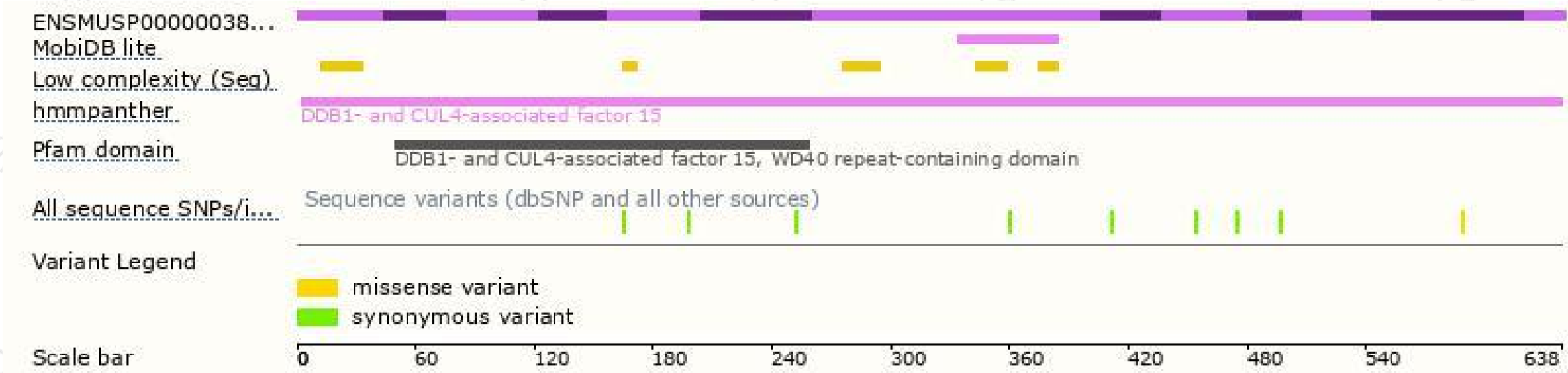


# Genomic location distribution





# Protein domain



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

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