

# ***Slc25a18*** Cas9-KO Strategy

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# Project Overview

**Project Name**

***Slc25a18***

**Project type**

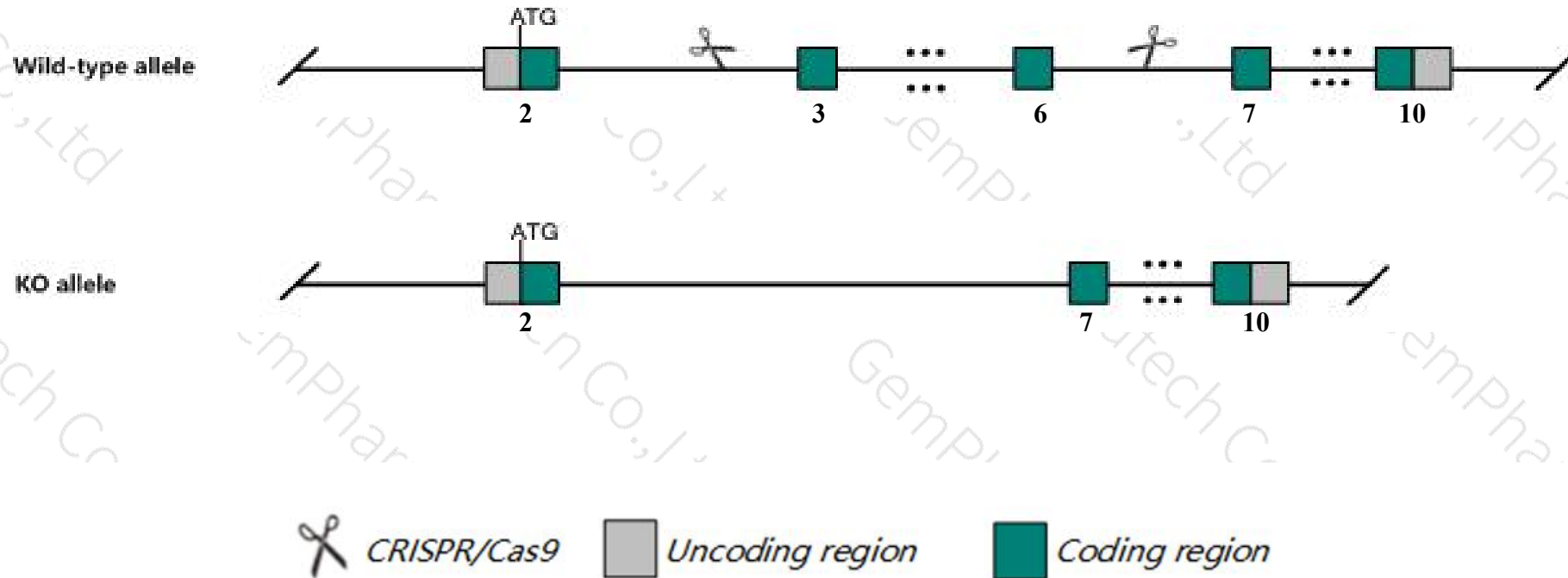
**Cas9-KO**

**Strain background**

**C57BL/6JGpt**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Slc25a18* gene. The schematic diagram is as follows:



- The *Slc25a18* gene has 1 transcript. According to the structure of *Slc25a18* gene, exon3-exon6 of *Slc25a18-201* (ENSMUST00000112682.3) transcript is recommended as the knockout region. The region contains 389bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Slc25a18* gene. The brief process is as follows: CRISPR/Cas9 syst

- The *Slc25a18* gene is located on the Chr6. 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)

## Slc25a18 solute carrier family 25 (mitochondrial carrier), member 18 [ *Mus musculus* (house mouse) ]

Gene ID: 71803, updated on 12-Aug-2019

### Summary

Official Symbol	Slc25a18 provided by <a href="#">MGI</a>
Official Full Name	solute carrier family 25 (mitochondrial carrier), member 18 provided by <a href="#">MGI</a>
Primary source	<a href="#">MGI:MGI:1919053</a>
See related	<a href="#">Ensembl:ENSMUSG00000004902</a>
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	<a href="#">Mus musculus</a>
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	AW125787; 1500015I14Rik
Expression	Biased expression in cortex adult (RPKM 19.5), frontal lobe adult (RPKM 19.4) and 6 other tissues <a href="#">See more</a>
Orthologs	<a href="#">human</a> <a href="#">all</a>

### Genomic context

Location: 6 F1; 6 57.0 cM

See Slc25a18 in [Genome Data Viewer](#)

Exon count: 11

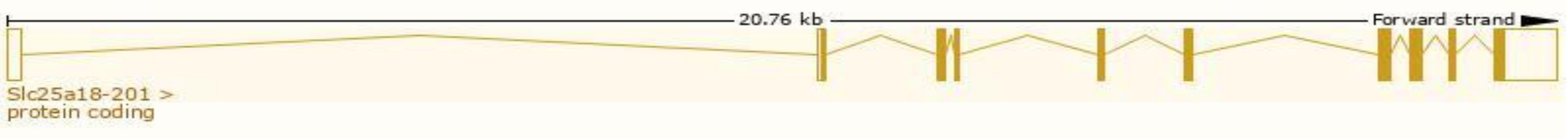
Annotation release	Status	Assembly	Chr	Location
<a href="#">108</a>	current	GRCm38.p6 ( <a href="#">GCF_000001635.26</a> )	6	NC_000072.6 (120773504..120794169)
Build 37.2	previous assembly	MGSCv37 ( <a href="#">GCF_000001635.18</a> )	6	NC_000072.5 (120723786..120744000)

# Transcript information (Ensembl)

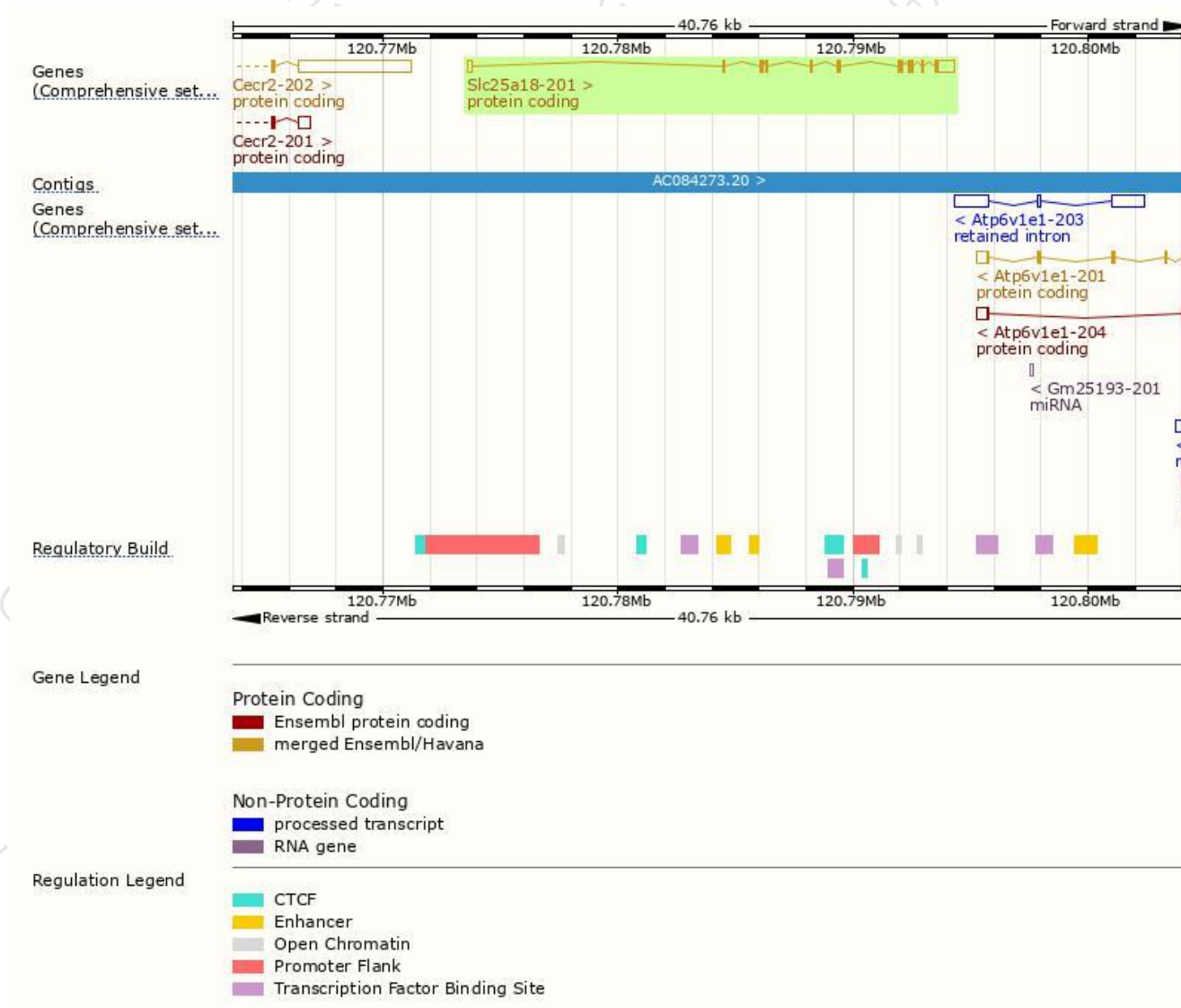
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Slc25a18-201	<a href="#">ENSMUST00000112682.3</a>	1911	<a href="#">320aa</a>	Protein coding	<a href="#">CCDS39614</a>	<a href="#">Q9DB41</a>	TSL:1 GENCODE basic APPRIS P1

The strategy is based on the design of *Slc25a18-201* transcript, The transcription is shown below

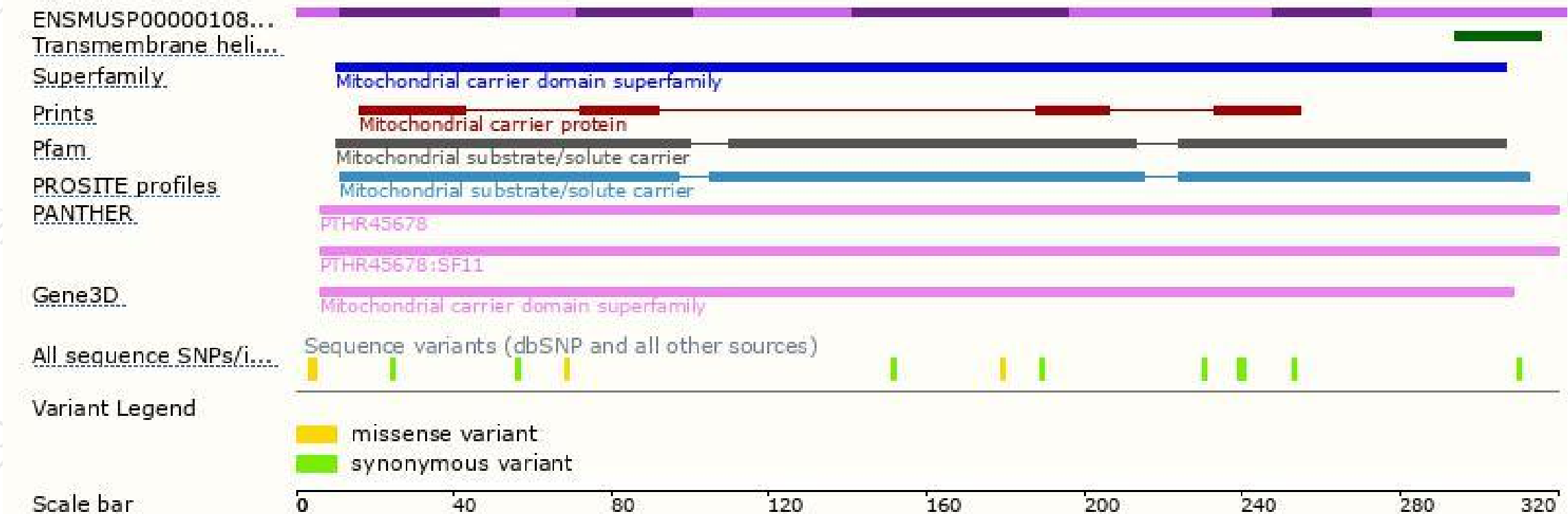


# Genomic location distribution





# Protein domain



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

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