

Slc10a6 Cas9-KO Strategy

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Reviewer:

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Design Date:

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Project Overview

Project Name

Slc10a6

Project type

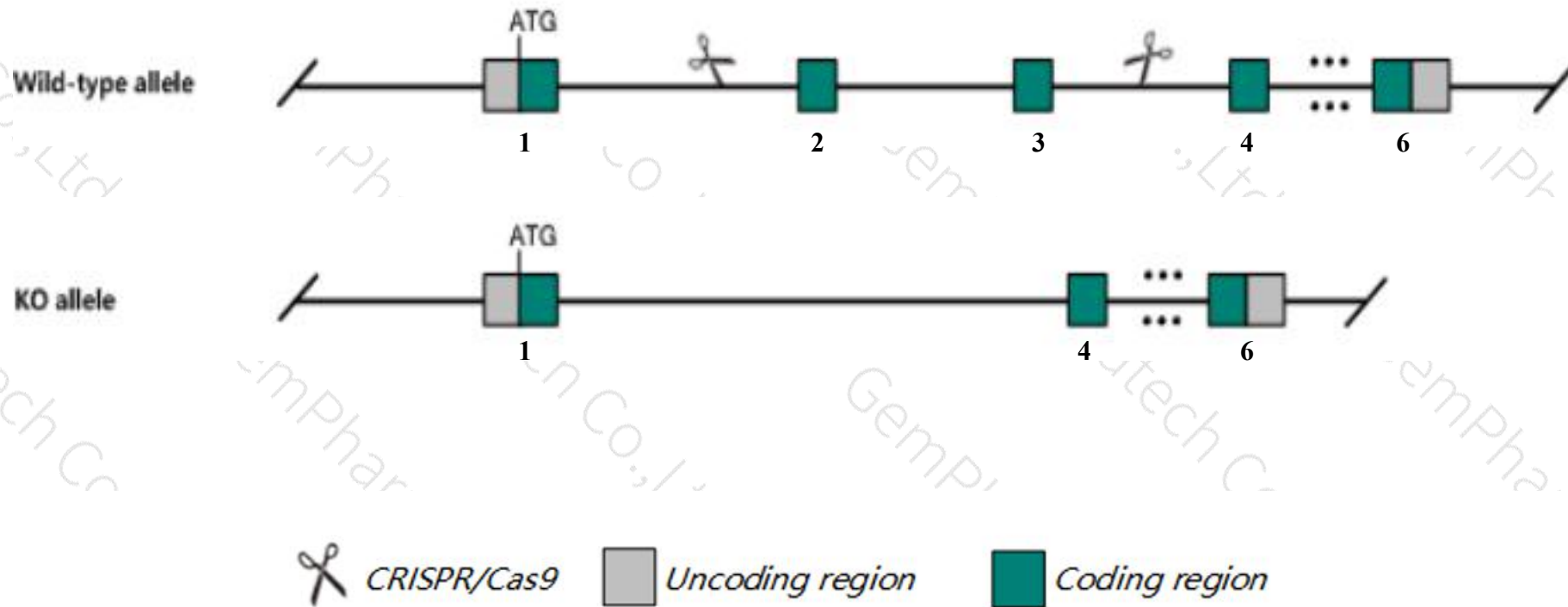
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Slc10a6* gene. The schematic diagram is as follows:



- The *Slc10a6* gene has 1 transcript. According to the structure of *Slc10a6* gene, exon2-exon3 of *Slc10a6*-201(ENSMUST00000031263.1) transcript is recommended as the knockout region. The region contains 208bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Slc10a6* gene. The brief process is as follows: CRISPR/Cas9 system were microinjected into the fertilized eggs of C57BL/6JGpt mice. Fertilized eggs were transplanted to obtain positive F0 mice which were confirmed by PCR and sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6JGpt mice.

- The *Slc10a6* 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)

Slc10a6 solute carrier family 10 (sodium/bile acid cotransporter family), member 6 [*Mus musculus* (house mouse)]

Gene ID: 75750, updated on 26-Jun-2020

Summary

Official Symbol Slc10a6 provided by [MGI](#)

Official Full Name solute carrier family 10 (sodium/bile acid cotransporter family), member 6 provided by [MGI](#)

Primary source [MGI:MGI:1923000](#)

See related [Ensembl:ENSMUSG00000029321](#)

Gene type protein coding

RefSeq status PROVISIONAL

Organism [Mus musculus](#)

Lineage Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus

Also known as Soat; C78479; 8430417G17Rik

Expression Biased expression in lung adult (RPKM 9.0), subcutaneous fat pad adult (RPKM 3.7) and 7 other tissues [See more](#)

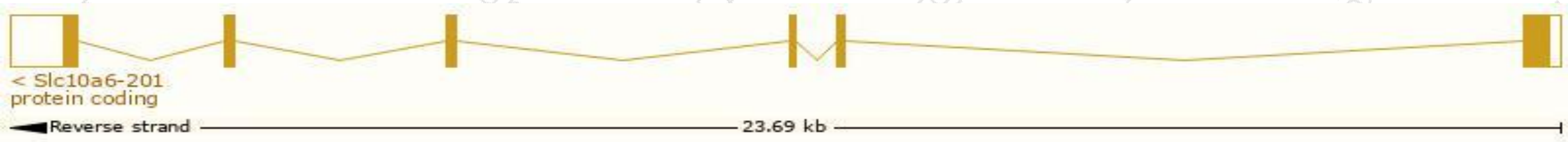
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

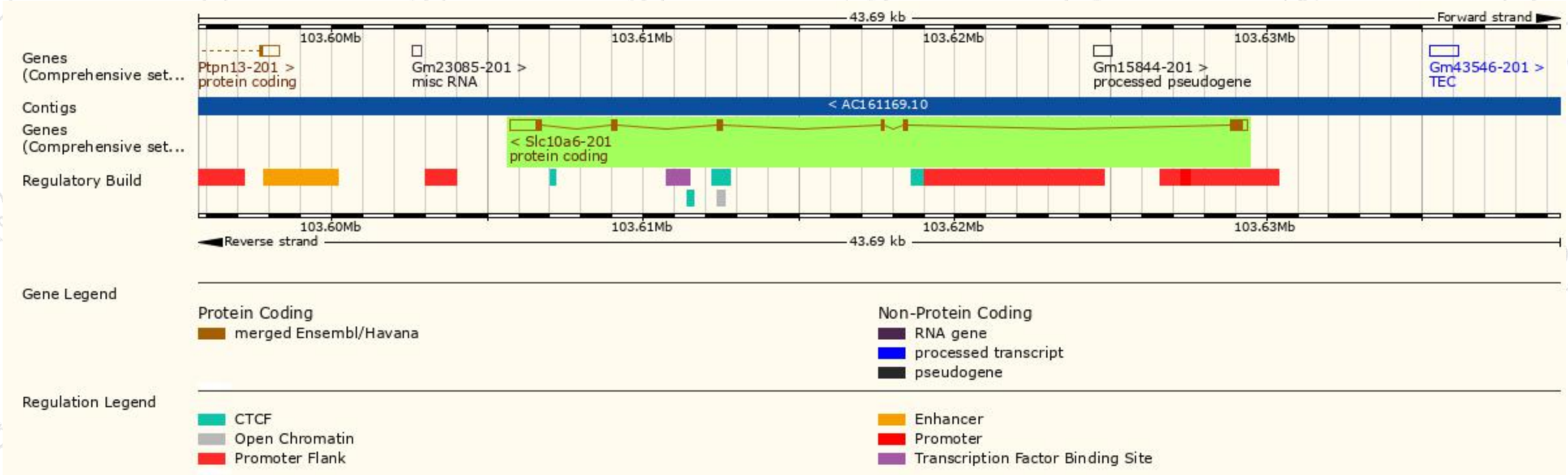
The gene has 1 transcript, and the transcript is shown below:

| Name | Transcript ID | bp | Protein | Biotype | CCDS | UniProt | Flags | | |
|-------------|--------------------------------------|------|-----------------------|----------------|---------------------------|------------------------|-------|---------------|-----------|
| Slc10a6-201 | ENSMUST00000031263.1 | 2124 | 373aa | Protein coding | CCDS19477 | Q9CXB2 | TSL:1 | GENCODE basic | APPRIS P1 |

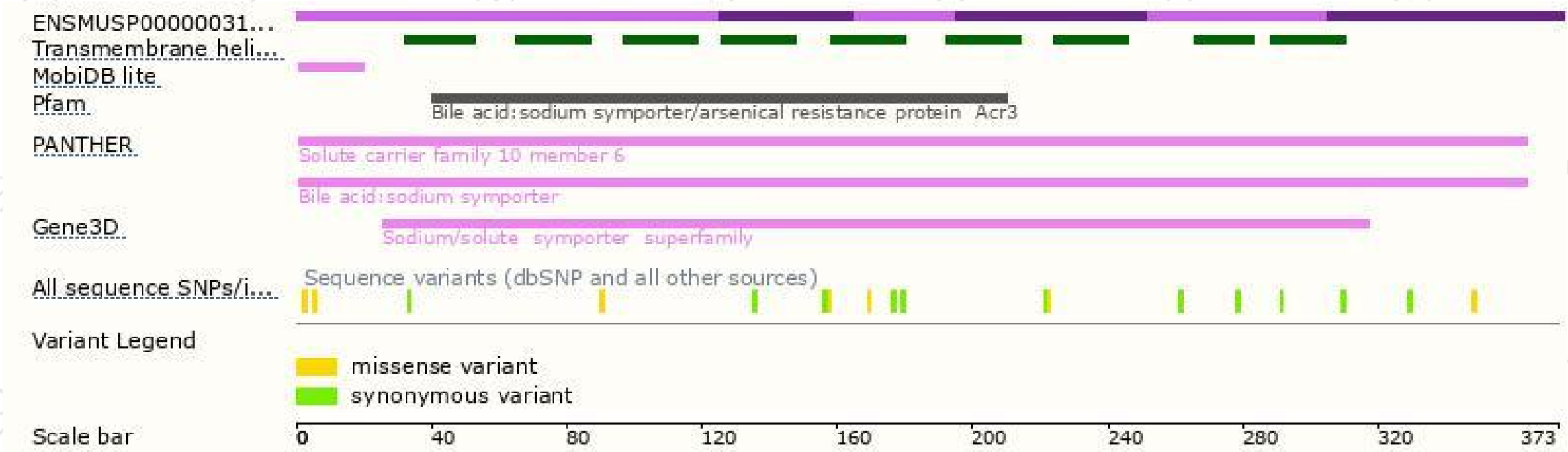
The strategy is based on the design of *Slc10a6-201* transcript, the transcription is shown below:



Genomic location distribution



Protein domain



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

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