

Otud1 Cas9-KO Strategy

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Project Overview



Project Name

Otud1

Project type

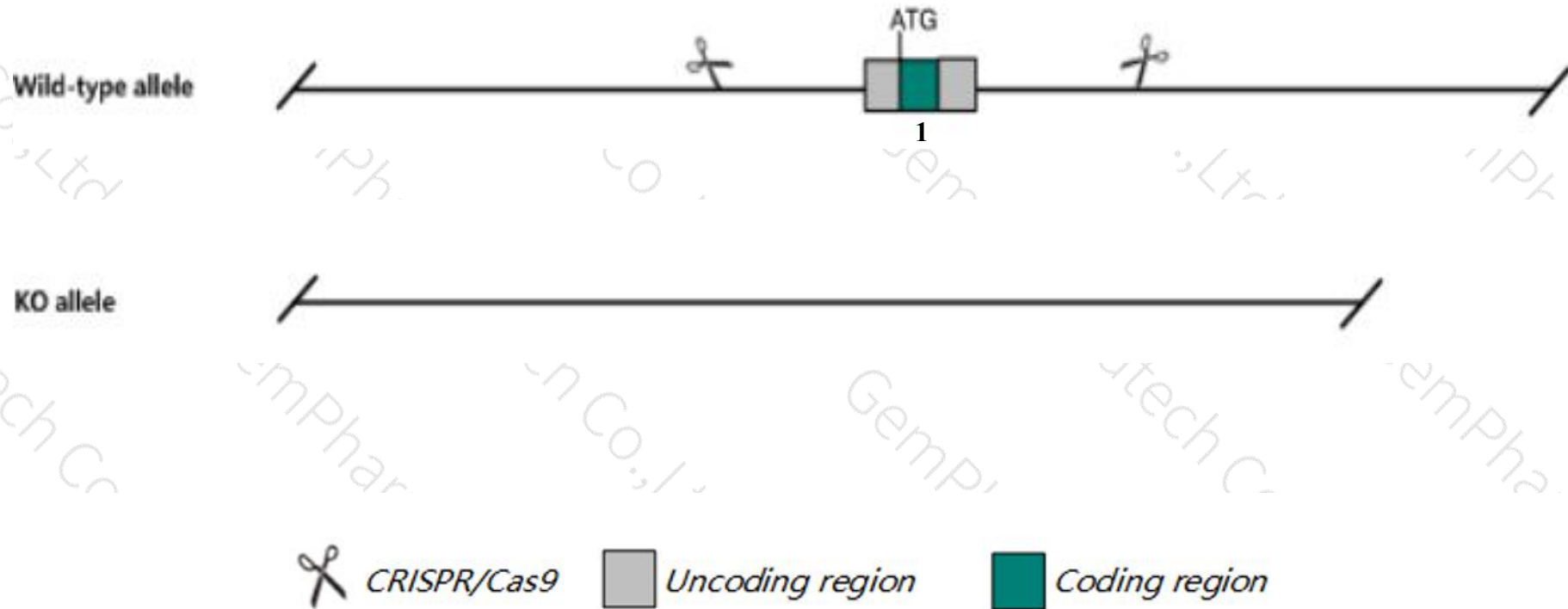
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Otud1* gene. The schematic diagram is as follows:



- The *Otud1* gene has 1 transcript. According to the structure of *Otud1* gene, exon1 of *Otud1-201* (ENSMUST00000052168.5) 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 *Otud1* gene. The brief process is as follows: CRISPR/Cas9 system

Notice

- The *Otud1* gene is located on the Chr2. 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)

Otud1 OTU domain containing 1 [Mus musculus (house mouse)]

Gene ID: 71198, updated on 13-Mar-2020

Summary



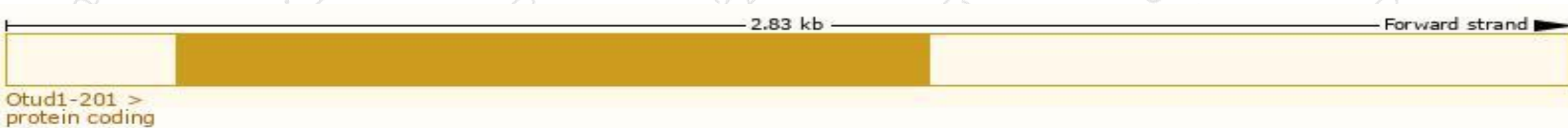
Official Symbol	Otud1 provided by MGI
Official Full Name	OTU domain containing 1 provided by MGI
Primary source	MGI:MGI:1918448
See related	Ensembl:ENSMUSG00000043415
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	4933428L19Rik
Orthologs	human all

Transcript information (Ensembl)

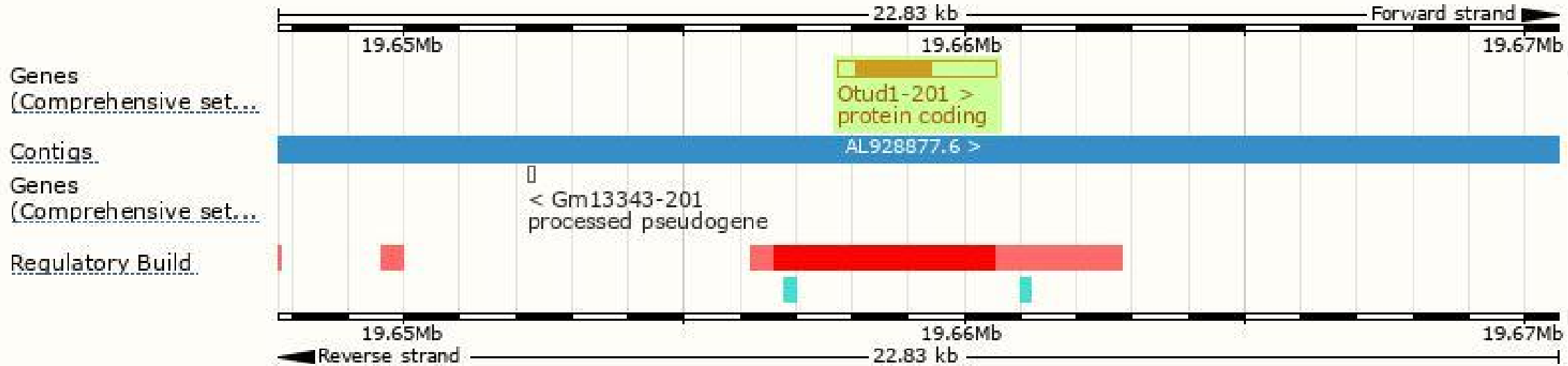
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Otud1-201	ENSMUST00000052168.5	2832	454aa	Protein coding	CCDS50508	Q9CUB6	TSL:NA GENCODE basic APPRIS P1

The strategy is based on the design of *Otud1-201* transcript, the transcription is shown below:



Genomic location distribution



Regulation Legend

- CTCF
- Promoter
- Promoter Flank

Gene Legend

- Protein Coding
 - merged Ensembl/Havana
- Non-Protein Coding
 - pseudogene

Protein domain



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

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