

Ceacam18 Cas9-KO Strategy

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Project Overview

Project Name

Ceacam18

Project type

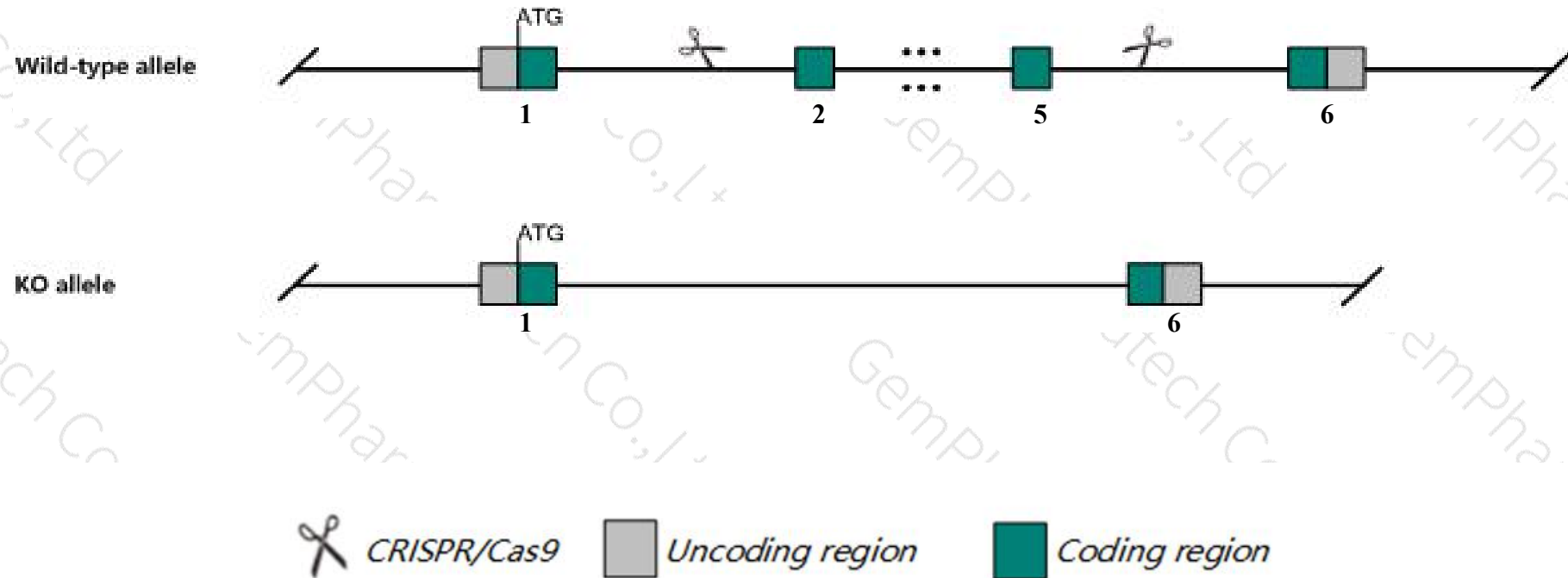
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Ceacam18* gene. The schematic diagram is as follows:



- The *Ceacam18* gene has 1 transcript. According to the structure of *Ceacam18* gene, exon2-exon5 of *Ceacam18-201* (ENSMUST00000032663.9) transcript is recommended as the knockout region. The region contains 1041bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Ceacam18* gene. The brief process is as follows: CRISPR/Cas9 sys

- The most of the coding sequence will be deleted but this region is not frameshift.
- The *Ceacam18* gene is located on the Chr7. 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)

Ceacam18 carcinoembryonic antigen-related cell adhesion molecule 18 [*Mus musculus* (house mouse)]

Gene ID: 72431, updated on 12-Aug-2019

Summary



Official Symbol	Ceacam18 provided by MGI
Official Full Name	carcinoembryonic antigen-related cell adhesion molecule 18 provided by MGI
Primary source	MGI:MGI:1919681
See related	Ensembl:ENSMUSG00000030472
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	2010110O04Rik
Expression	Biased expression in duodenum adult (RPKM 20.6), small intestine adult (RPKM 20.3) and 2 other tissues See more
Orthologs	human all

Genomic context



Location: 7; 7 B3

Exon count: 7

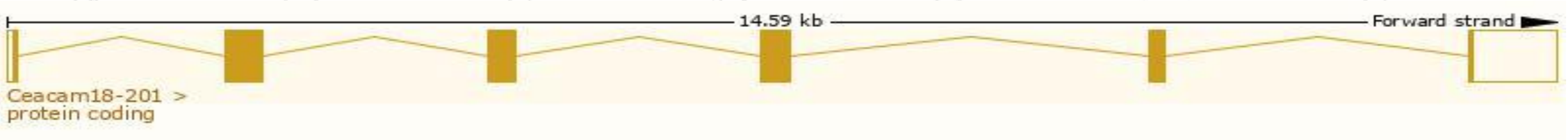
See Ceacam18 in [Genome Data Viewer](#)

Transcript information (Ensembl)

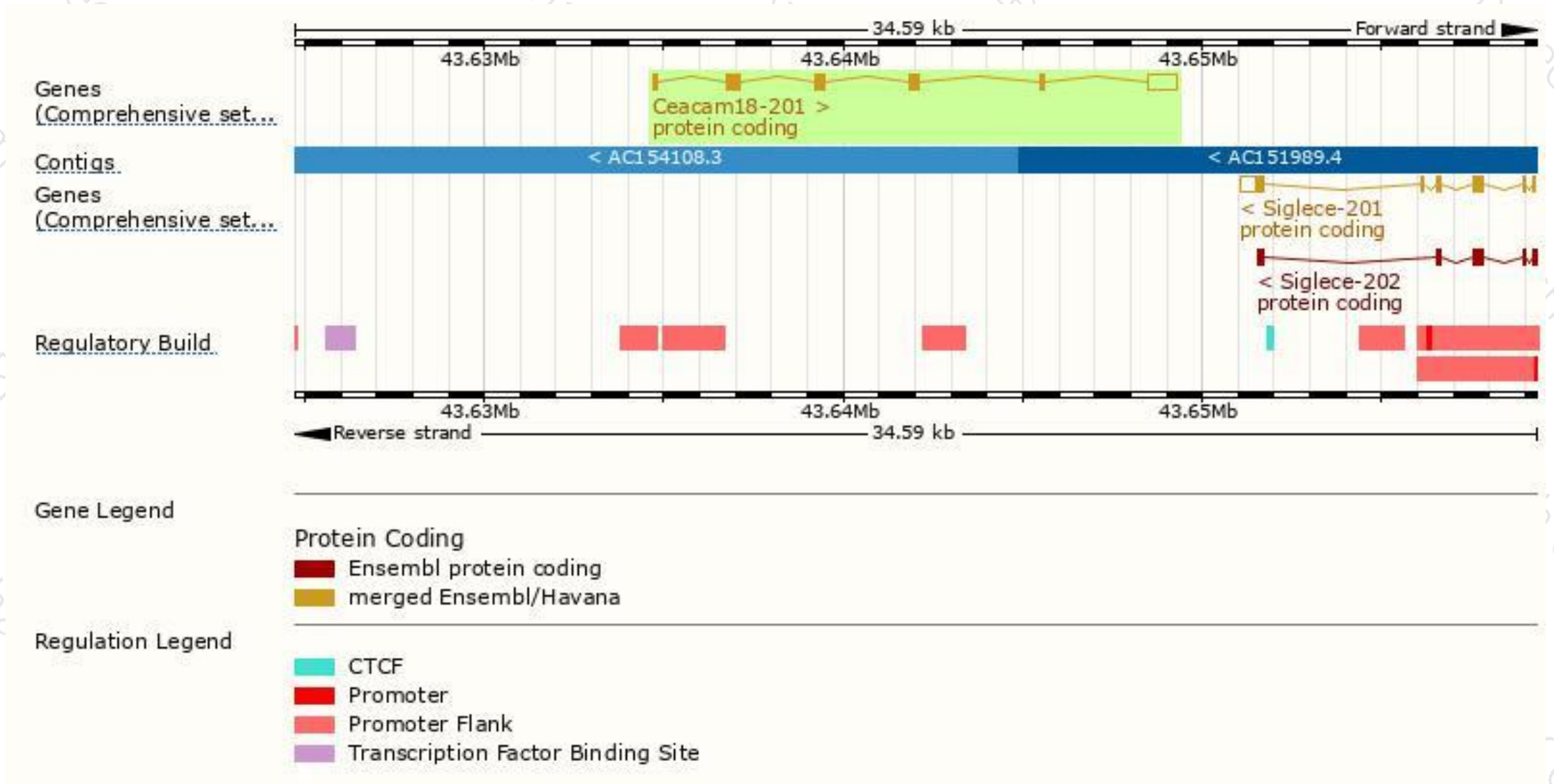
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Ceacam18-201	ENSMUST00000032663.9	1970	376aa	Protein coding	CCDS21177	Q9D871	TSL:1 GENCODE basic APPRIS P1

The strategy is based on the design of *Ceacam18-201* 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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