

Cdh22 Cas9-KO Strategy

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Design Date:

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Project Overview

Project Name

Cdh22

Project type

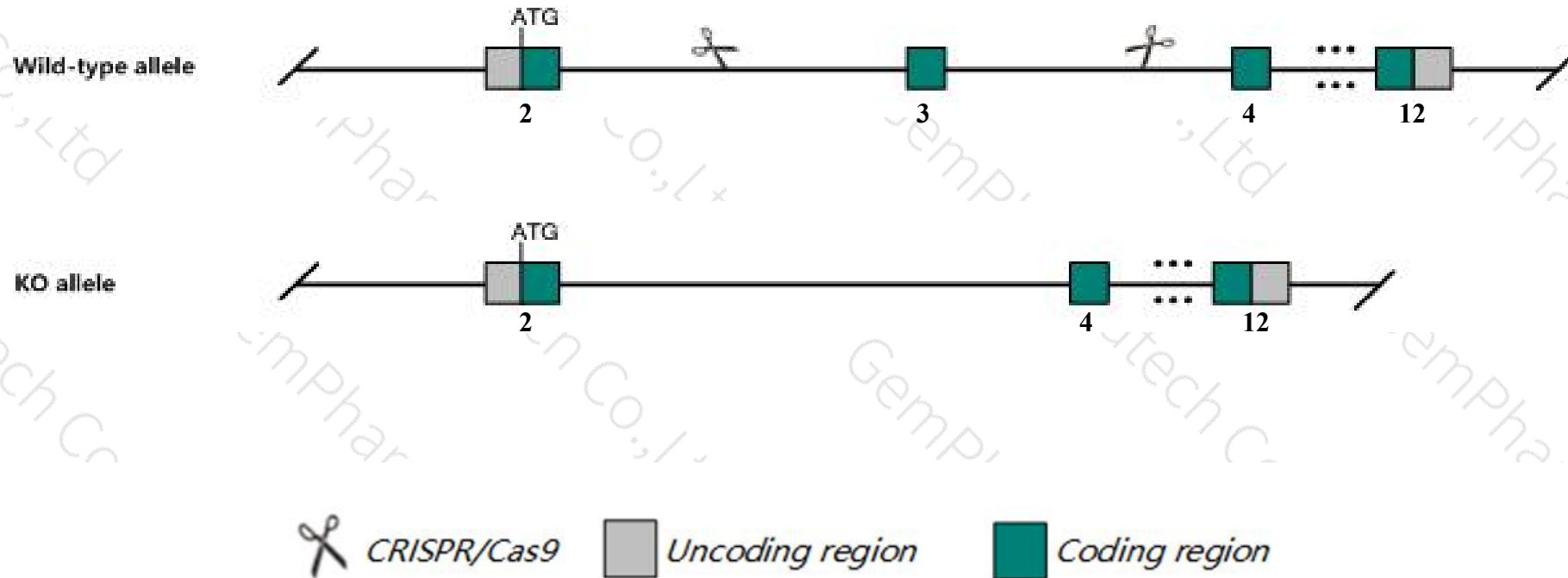
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Cdh22* gene. The schematic diagram is as follows:



- The *Cdh22* gene has 2 transcripts. According to the structure of *Cdh22* gene, exon3 of *Cdh22-201* (ENSMUST00000065438.12) transcript is recommended as the knockout region. The region contains 295bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Cdh22* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Cdh22* 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)

Cdh22 cadherin 22 [Mus musculus (house mouse)]

Gene ID: 104010, updated on 31-Jan-2019

Summary



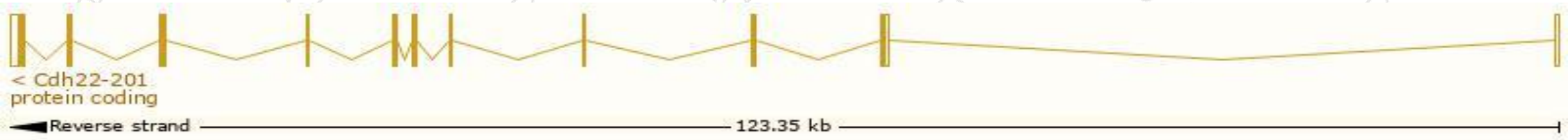
Official Symbol	Cdh22 provided by MGI
Official Full Name	cadherin 22 provided by MGI
Primary source	MGI:MGI:1341843
See related	Ensembl:ENSMUSG00000053166
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Expression	Biased expression in cerebellum adult (RPKM 8.6), frontal lobe adult (RPKM 5.4) and 8 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

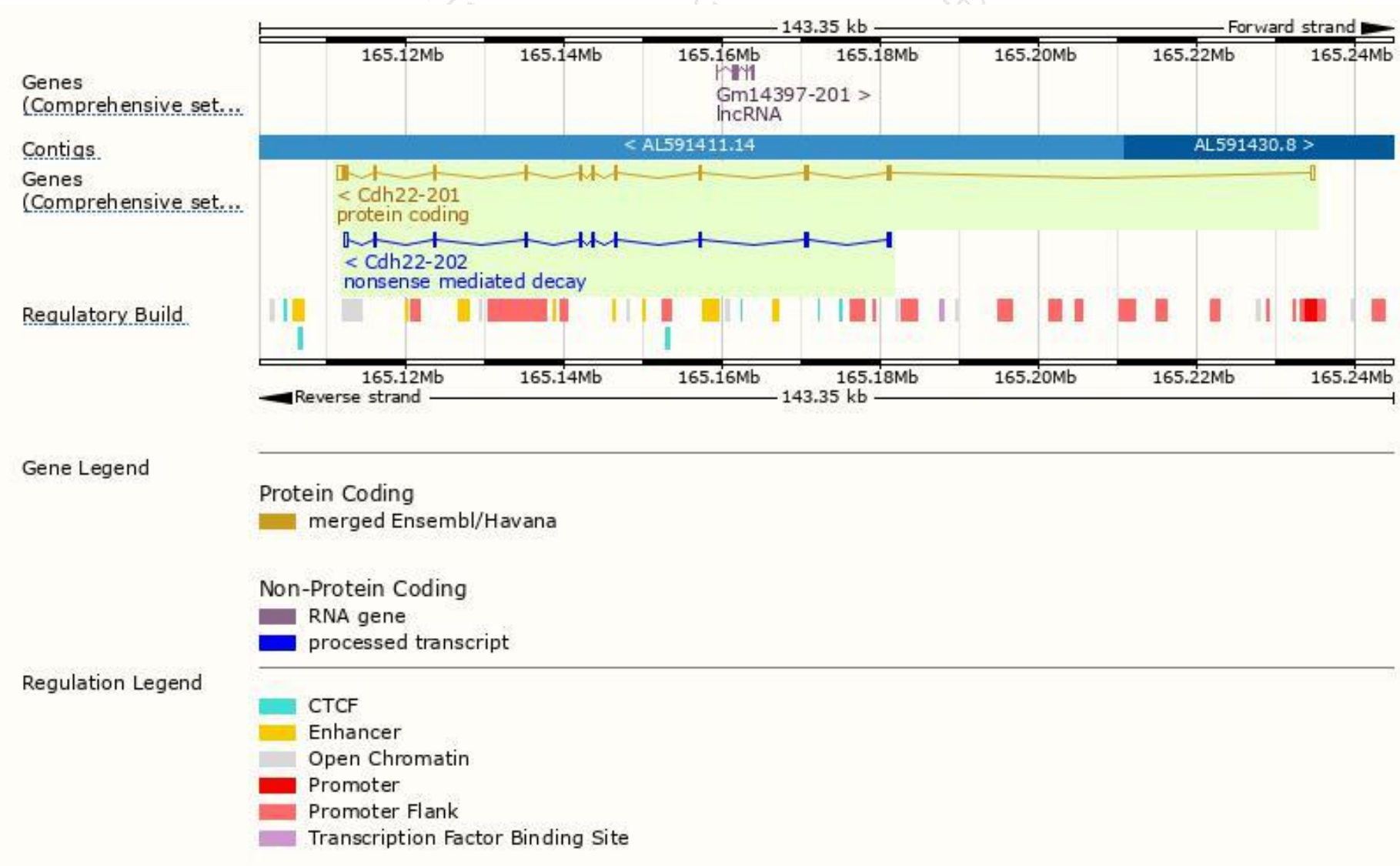
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Cdh22-201	ENSMUST00000065438.12	3702	813aa	Protein coding	CCDS17073	Q9WTP5	TSL:1 GENCODE basic APPRIS P1
Cdh22-202	ENSMUST00000138643.1	2521	408aa	Nonsense mediated decay	-	I6L9J1	TSL:5

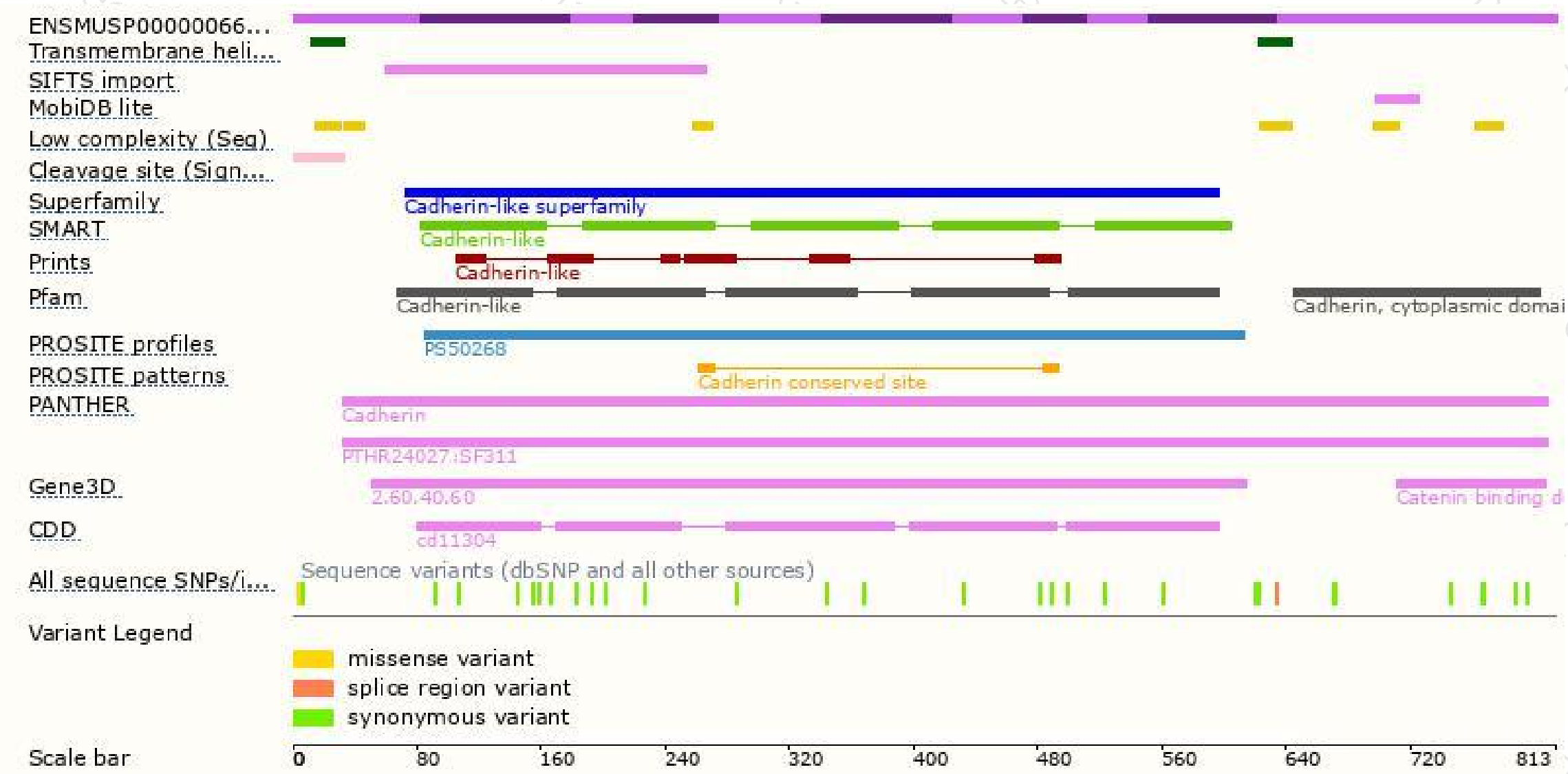
The strategy is based on the design of *Cdh22-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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