

Reep2 Cas9-KO Strategy

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Design Date: 2020-5-21

Project Overview

Project Name

Reep2

Project type

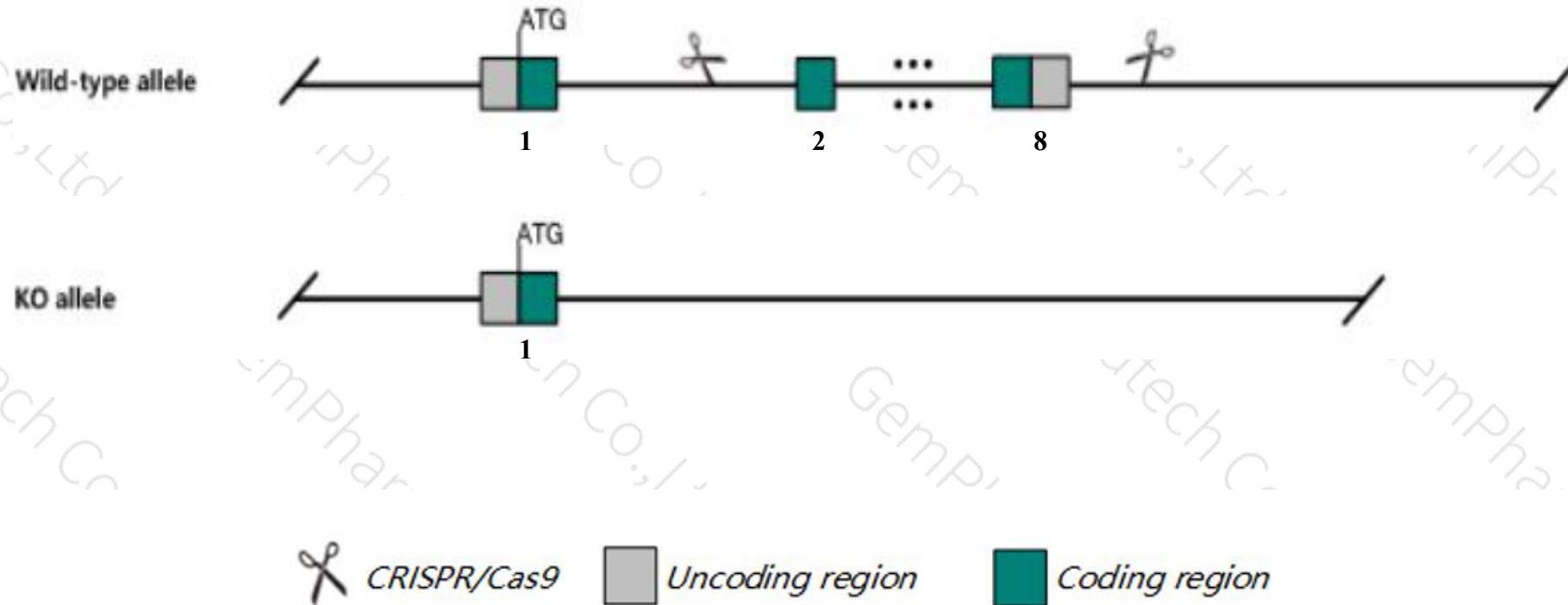
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Reep2* gene. The schematic diagram is as follows:



- The *Reep2* gene has 1 transcript. According to the structure of *Reep2* gene, exon2-exon8 of *Reep2-201* (ENSMUST00000043484.7) transcript is recommended as the knockout region. The region contains 733bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Reep2* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Reep2* gene is located on the Chr18. 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)

Reep2 receptor accessory protein 2 [Mus musculus (house mouse)]

Gene ID: 225362, updated on 13-Mar-2020

Summary

Official Symbol	Reep2 provided by MGI
Official Full Name	receptor accessory protein 2 provided by MGI
Primary source	MGI:MGI:2385070
See related	Ensembl:ENSMUSG00000038555
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 71.0), testis adult (RPKM 55.4) and 9 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

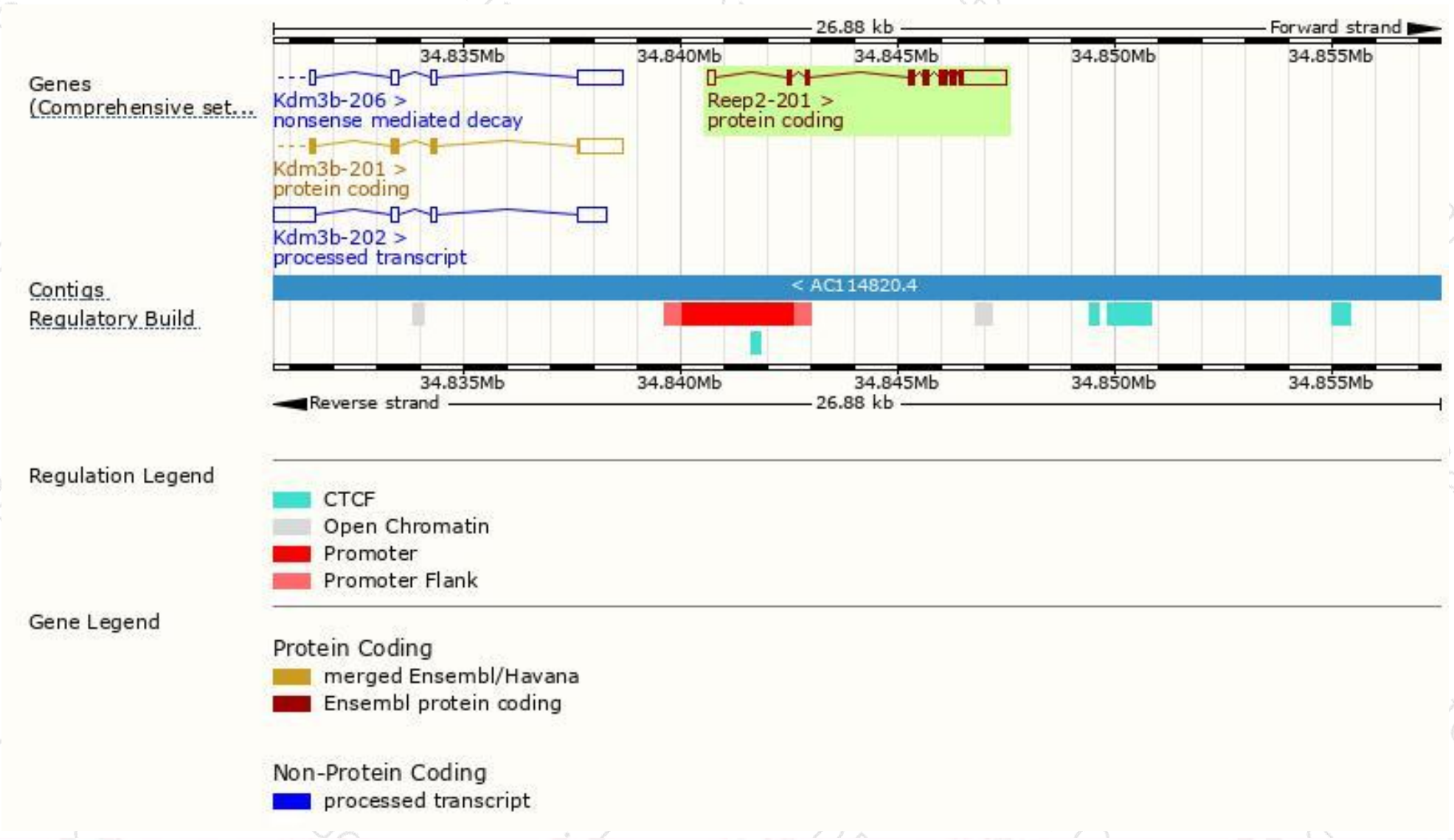
The gene has 1 transcript, and the transcript is shown below:

Name ▲	Transcript ID ▲	bp ▲	Protein ▲	Biotype ▲	CCDS ▲	UniProt ▲	Flags ▲		
Reep2-201	ENSMUST00000043484.7	1926	254aa	Protein coding	CCDS29135	Q8VCD6	TSL:1	GENCODE basic	APPRIS P1

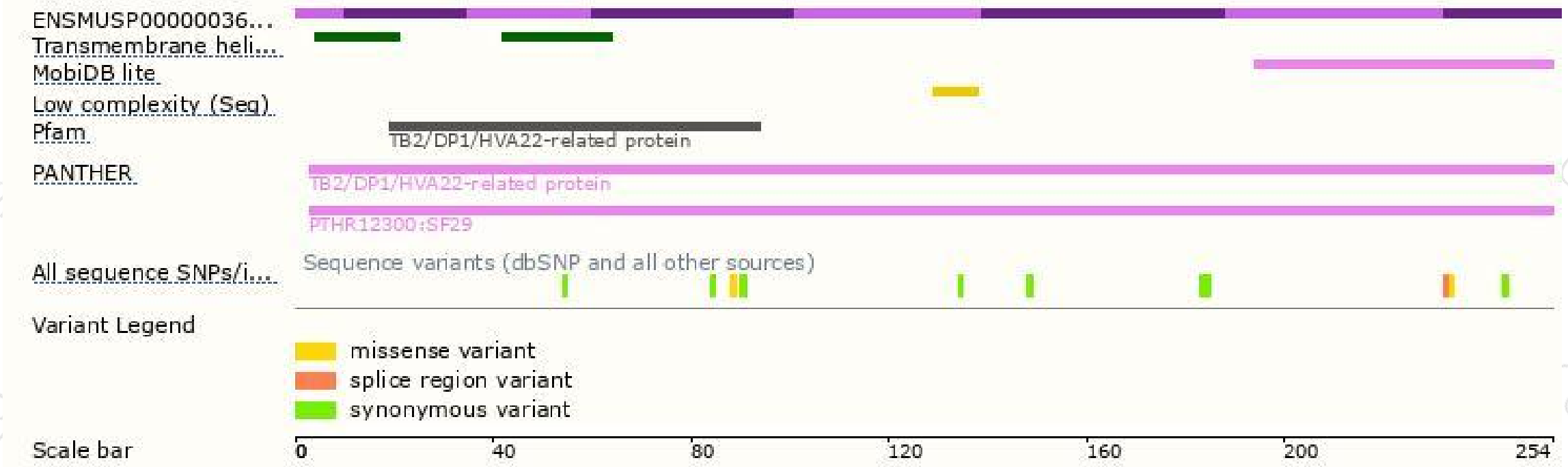
The strategy is based on the design of *Reep2-201* transcript, the transcription is shown below:



Genomic location distribution



Protein domain



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

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