

Krt35 Cas9-KO Strategy

Designer:

Yanhua Shen

Reviewer:

Xueting Zhang

Design Date:

2020-01-20

Project Overview

Project Name

Krt35

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Krt35* gene. The schematic diagram is as follows:



- The *Krt35* gene has 2 transcripts. According to the structure of *Krt35* gene, exon1-exon7 of *Krt35-201* (ENSMUST00000103127.3) 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 *Krt35* gene. The brief process is as follows: CRISPR/Cas9 system

- The knockout region is approximately 3.8 kb from the 5' end of the *Krt32* gene, and its effect is unknown.
- The *Krt35* gene is located on the Chr11. 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)

Krt35 keratin 35 [*Mus musculus* (house mouse)]

Gene ID: 53617, updated on 12-Aug-2019

Summary

Official Symbol	Krt35 provided by MGI
Official Full Name	keratin 35 provided by MGI
Primary source	MGI:MGI:1858899
See related	Ensembl:ENSMUSG00000048013
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	Ha5; Krtha5; Krt1-24; AI662400
Expression	Low expression observed in reference dataset See more
Orthologs	human all

Genomic context

Location: 11; 11 D

Exon count: 7

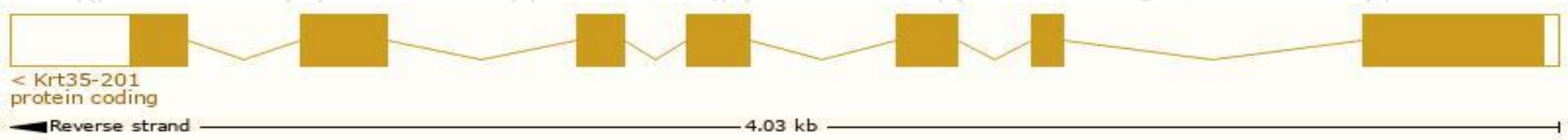
See Krt35 in [Genome Data Viewer](#)

Transcript information (Ensembl)

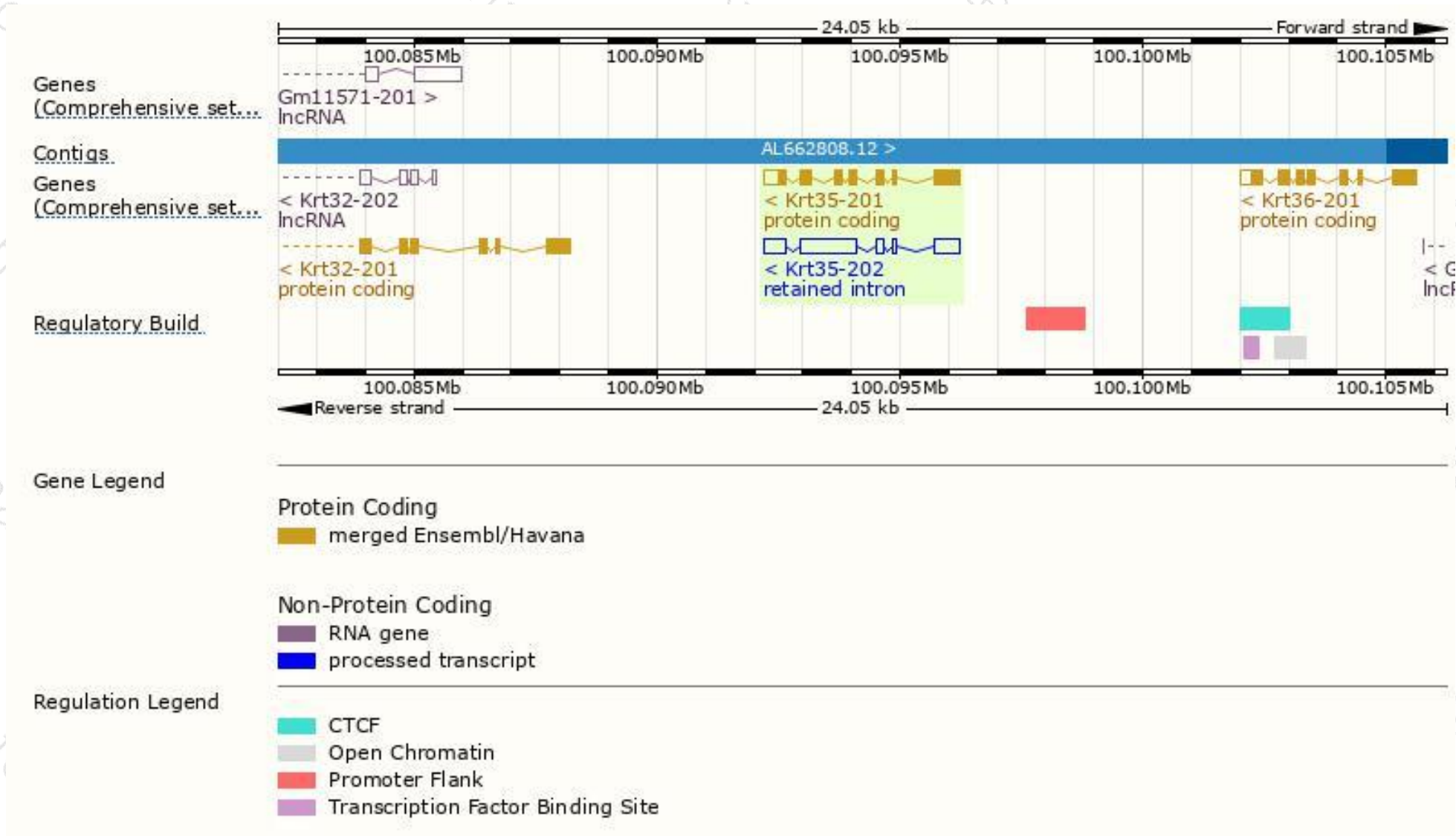
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Krt35-201	ENSMUST00000103127.3	1722	455aa	Protein coding	CCDS25407	Q497I4	TSL:1 GENCODE basic APPRIS P1
Krt35-202	ENSMUST00000173988.1	2394	No protein	Retained intron	-	-	TSL:2

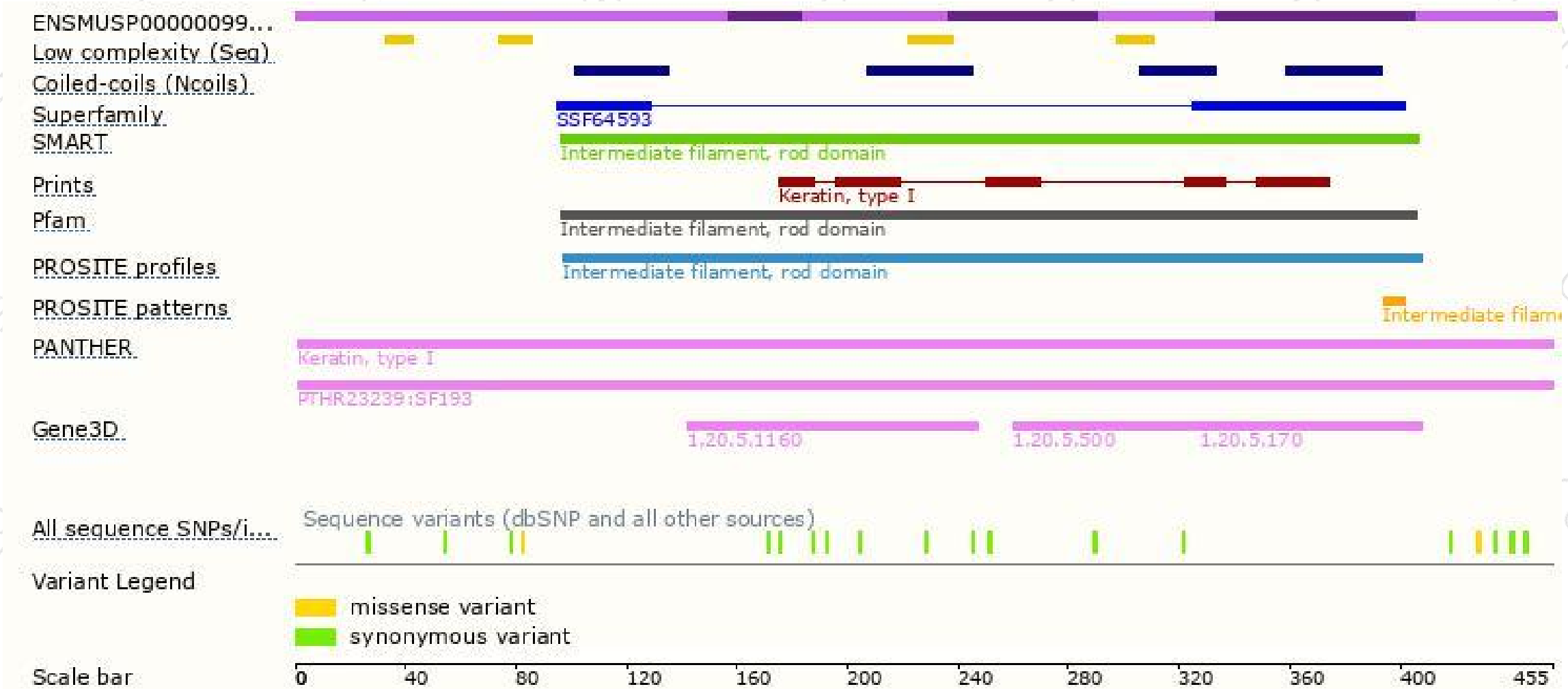
The strategy is based on the design of *Krt35-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

