

Krt24 Cas9-KO Strategy

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Project Overview

Project Name

Krt24

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Krt24* gene. The schematic diagram is as follows:



- The *Krt24* gene has 1 transcript. According to the structure of *Krt24* gene, exon1-exon8 of *Krt24-201* (ENSMUST00000017255.3) 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 *Krt24* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Krt24* 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)

Krt24 keratin 24 [*Mus musculus* (house mouse)]

Gene ID: 75706, updated on 12-Aug-2019

Summary

| | |
|--------------------|---|
| Official Symbol | Krt24 provided by MGI |
| Official Full Name | keratin 24 provided by MGI |
| Primary source | MGI:MGI:1922956 |
| See related | Ensembl:ENSMUSG00000020913 |
| 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 | K24; CK-24; 2310058N18Rik; 2310075C18Rik |
| Expression | Low expression observed in reference dataset See more |
| Orthologs | human all |

Genomic context

Location: 11; 11 D

Exon count: 8

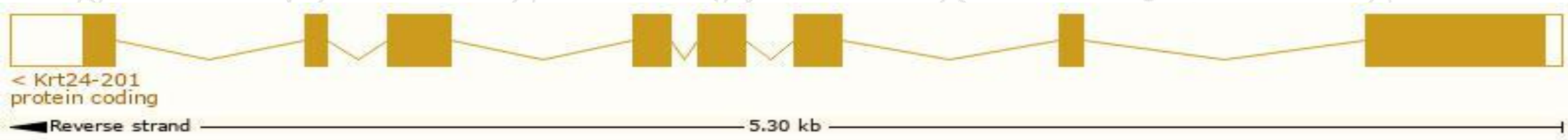
See Krt24 in [Genome Data Viewer](#)

Transcript information (Ensembl)

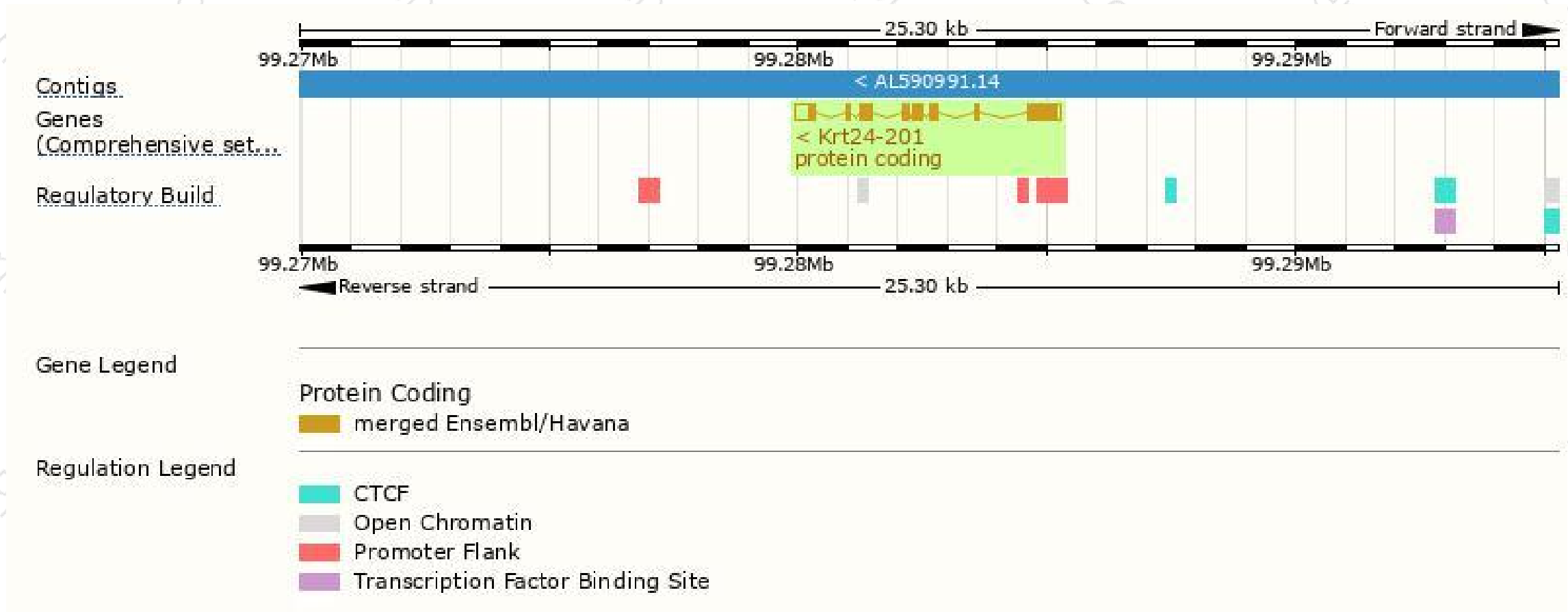
The gene has 1 transcript, and the transcript is shown below:

| Name | Transcript ID | bp | Protein | Biotype | CCDS | UniProt | Flags |
|-----------|--------------------------------------|------|-----------------------|----------------|---------------------------|------------------------|-------------------------------|
| Krt24-201 | ENSMUST00000017255.3 | 1847 | 512aa | Protein coding | CCDS36305 | A1L317 | TSL:1 GENCODE basic APPRIS P1 |

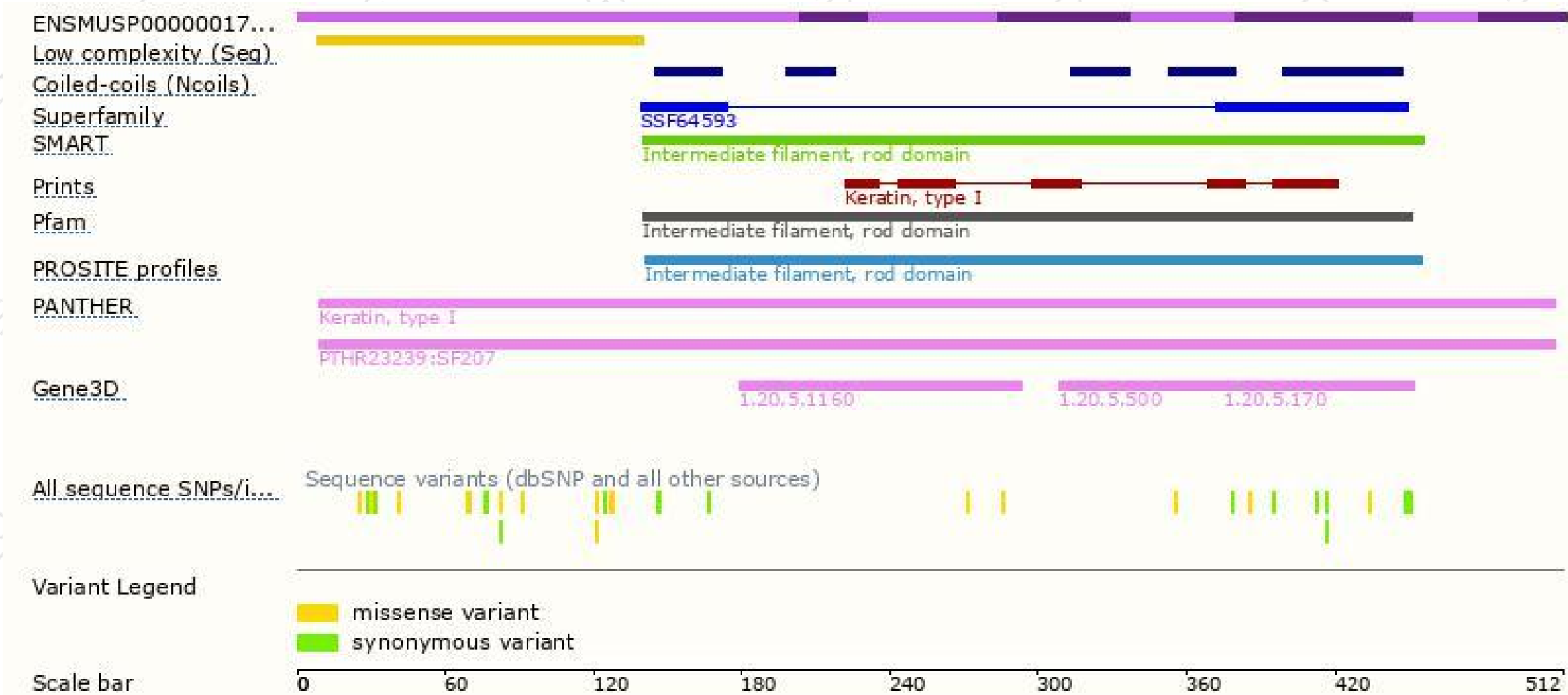
The strategy is based on the design of *Krt24-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

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