

Krt72 Cas9-KO Strategy

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Project Overview

Project Name

Krt72

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Krt72* gene. The schematic diagram is as follows:



- The *Krt72* gene has 2 transcripts. According to the structure of *Krt72* gene, exon2-exon8 of *Krt72-201* (ENSMUST00000071104.5) transcript is recommended as the knockout region. The region contains 919bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Krt72* gene. The brief process is as follows: CRISPR/Cas9 system

- Some amino acids will remain at the N-terminus and some functions may be retained.
- The *Krt72* gene is located on the Chr15. 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)

Krt72 keratin 72 [*Mus musculus* (house mouse)]

Gene ID: 105866, updated on 13-Aug-2019

Summary

Official Symbol	Krt72 provided by MGI
Official Full Name	keratin 72 provided by MGI
Primary source	MGI:MGI:2146034
See related	Ensembl:ENSMUSG00000056605
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	K72; CK-72; K6irs2; Krt2-35; A1507495; Krt72-ps
Expression	Low expression observed in reference dataset See more
Orthologs	human all

Genomic context

Location: 15; 15 F2

Exon count: 9

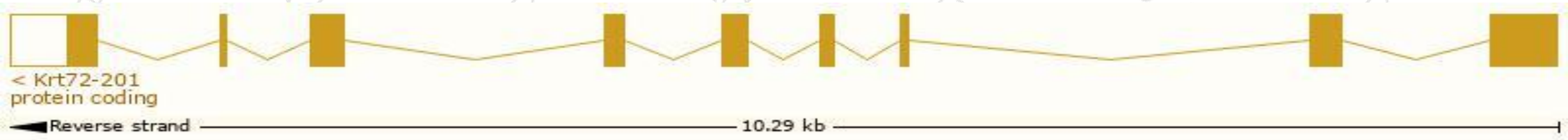
See Krt72 in [Genome Data Viewer](#)

Transcript information (Ensembl)

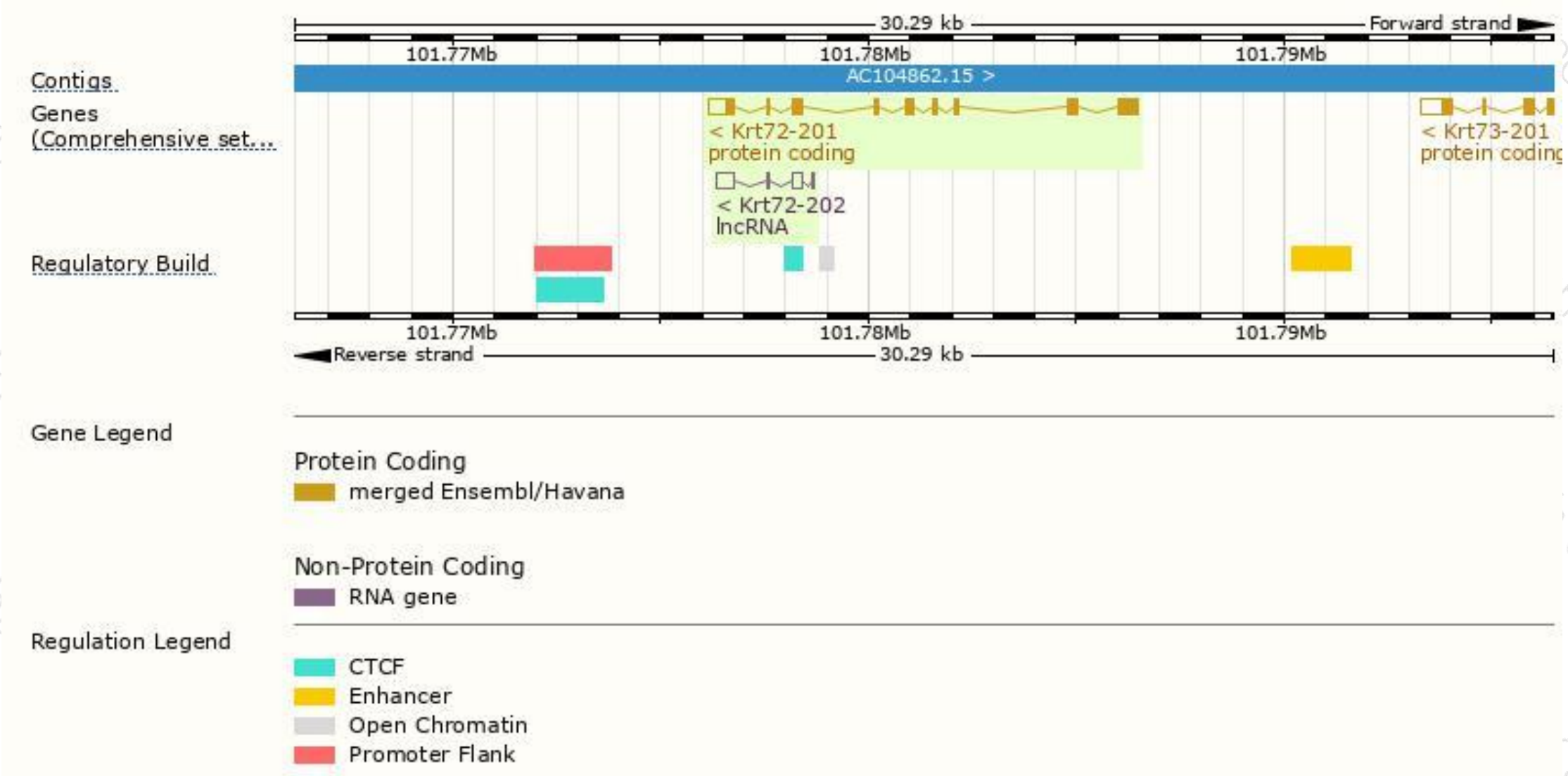
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Krt72-201	ENSMUST00000071104.5	1953	520aa	Protein coding	CCDS27863	Q6IME9	TSL:2 GENCODE basic APPRIS P1
Krt72-202	ENSMUST00000127671.2	715	No protein	lncRNA	-	-	TSL:3

The strategy is based on the design of *Krt72-201* 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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