

IL20 Cas9-KO Strategy

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Project Overview

Project Name

IL20

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Il20* gene. The schematic diagram is as follows:



- The *Il20* gene has 2 transcripts. According to the structure of *Il20* gene, exon1-exon5 of *Il20-201* (ENSMUST00000027673.10) 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 *Il20* gene. The brief process is as follows: CRISPR/Cas9 system w

- According to the existing MGI data, Homozygous mice show an increased inflammatory response in contact hypersensitivity assays.
- The *Il20* gene is located on the Chr1. 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)

Il20 interleukin 20 [Mus musculus (house mouse)]

Gene ID: 58181, updated on 31-Jan-2019

Summary



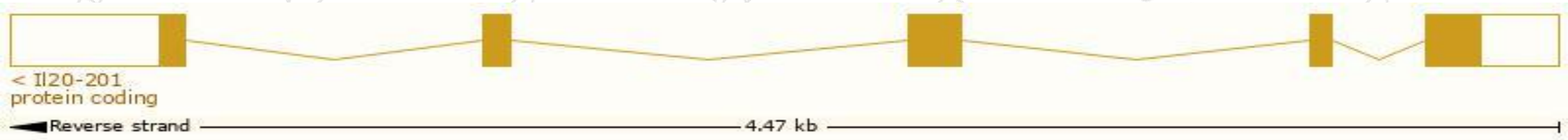
Official Symbol	Il20 provided by MGI
Official Full Name	interleukin 20 provided by MGI
Primary source	MGI:MGI:1890473
See related	Ensembl:ENSMUSG00000026416
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Zcyto10
Expression	Low expression observed in reference dataset See more
Orthologs	human all

Transcript information (Ensembl)

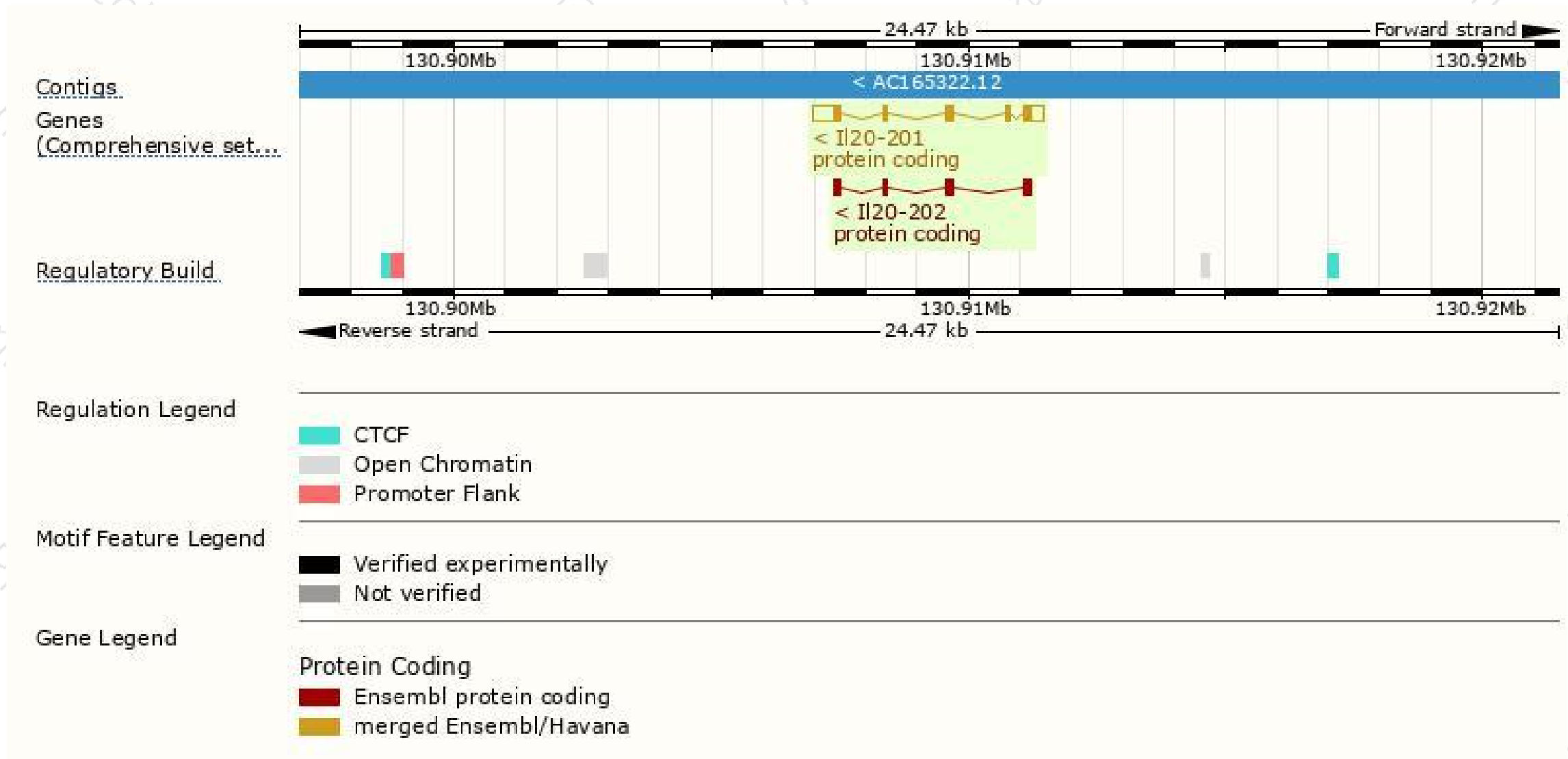
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
II20-201	ENSMUST00000027673.10	1186	176aa	Protein coding	CCDS15263	Q2NKI0 Q9JKV9	TSL:1 GENCODE basic APPRIS P1
II20-202	ENSMUST00000188581.1	465	154aa	Protein coding	CCDS78673	Q2THG5	TSL:1 GENCODE basic

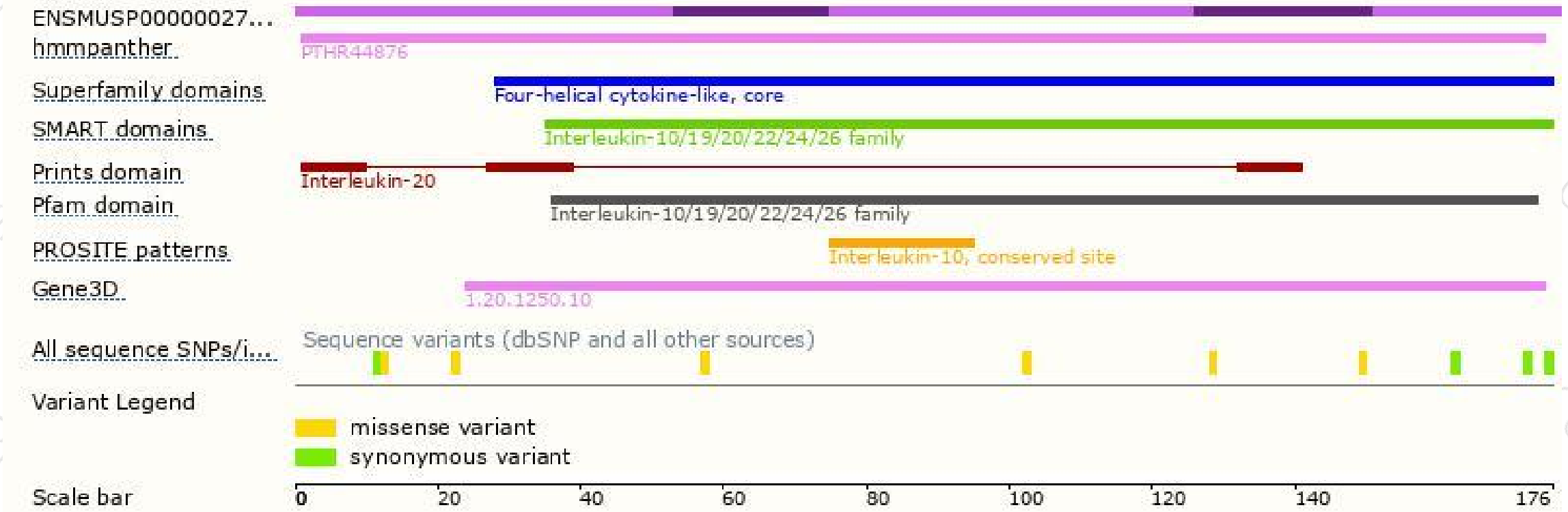
The strategy is based on the design of *II20-201* transcript,The transcription is shown below



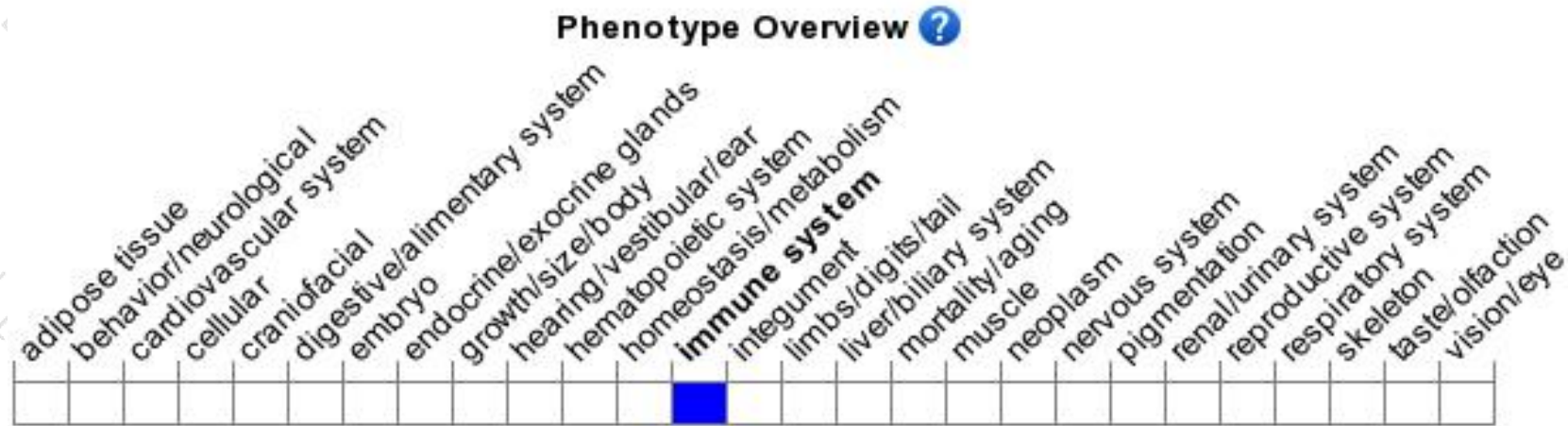
Genomic location distribution



Protein domain



Mouse phenotype description(MGI)



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

According to the existing MGI data, Homozygous mice show an increased inflammatory response in contact hypersensitivity assays.

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

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