

***Myo3b* Cas9-KO Strategy**

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Design Date: 2019-8-28

Project Overview

Project Name

Myo3b

Project type

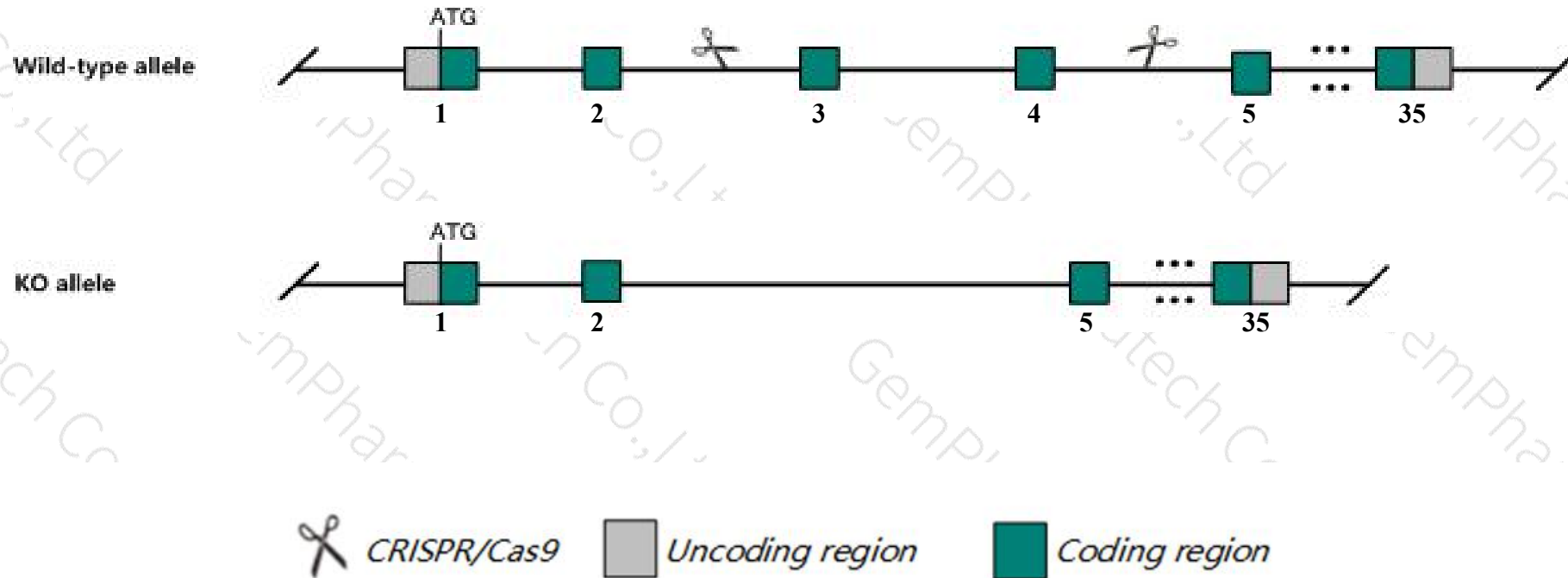
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Myo3b* gene. The schematic diagram is as follows:



- The *Myo3b* gene has 3 transcripts. According to the structure of *Myo3b* gene, exon3-exon4 of *Myo3b-201* (ENSMUST00000060208.10) transcript is recommended as the knockout region. The region contains 319bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Myo3b* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Myo3b* gene is located on the Chr2. 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)

Myo3b myosin IIIB [Mus musculus (house mouse)]

Gene ID: 329421, updated on 31-Jan-2019

Summary



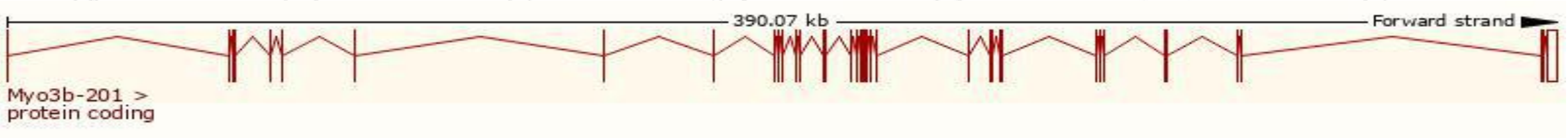
Official Symbol	Myo3b provided by MGI
Official Full Name	myosin IIIB provided by MGI
Primary source	MGI:MGI:2448580
See related	Ensembl:ENSMUSG00000042064
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	A430065P19Rik
Expression	Biased expression in genital fat pad adult (RPKM 8.0), kidney adult (RPKM 0.5) and 1 other tissue See more
Orthologs	human all

Transcript information (Ensembl)

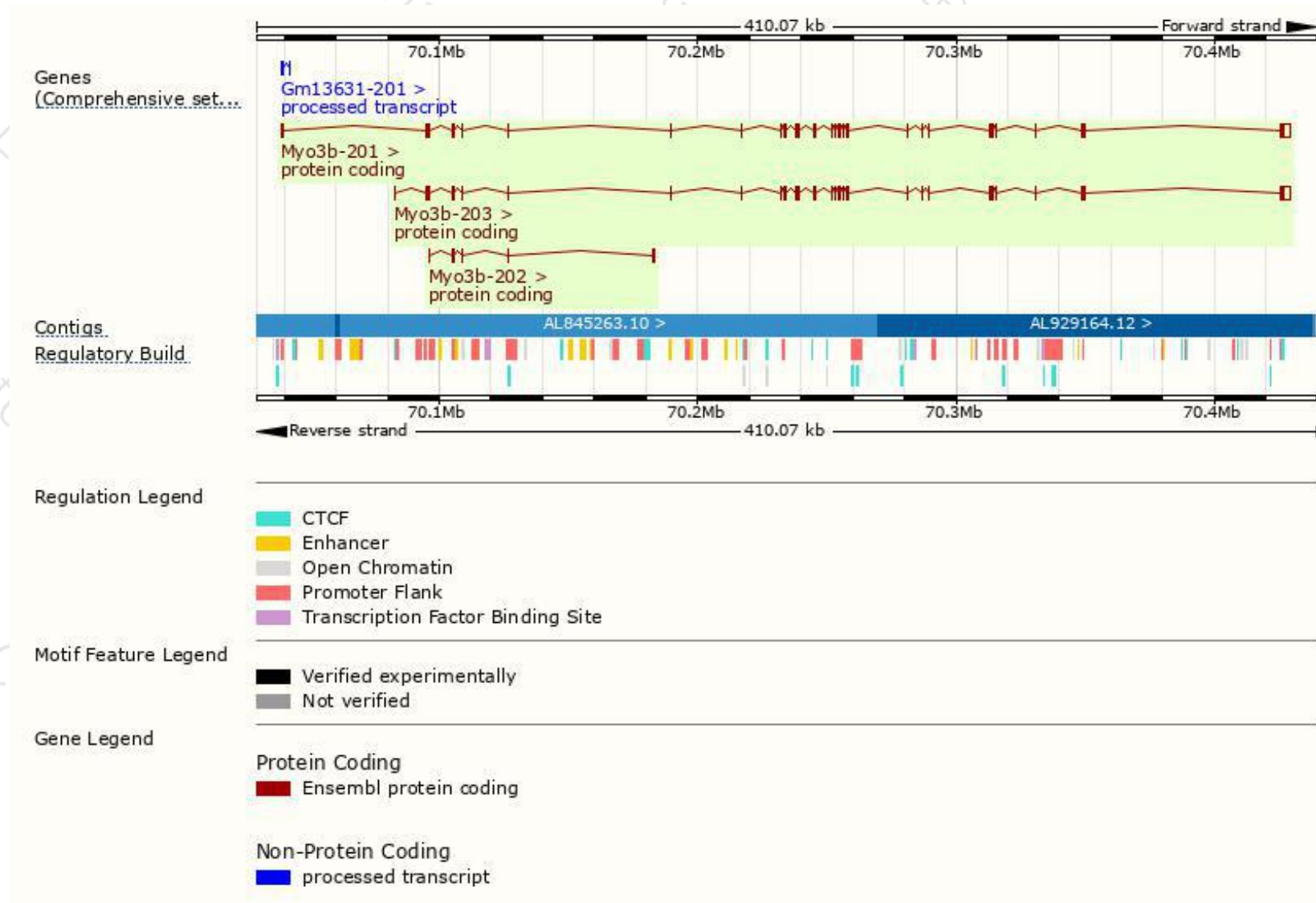
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Myo3b-201	ENSMUST00000060208.10	6256	1333aa	Protein coding	CCDS38139	F8VQ79	TSL:5 GENCODE basic APPRIS P2
Myo3b-203	ENSMUST00000112243.7	6213	1305aa	Protein coding	-	Q1EG27	TSL:5 GENCODE basic APPRIS ALT2
Myo3b-202	ENSMUST00000112241.1	1319	188aa	Protein coding	-	Q0P645	TSL:1 GENCODE basic

The strategy is based on the design of *Myo3b-201* transcript,The transcription is shown below



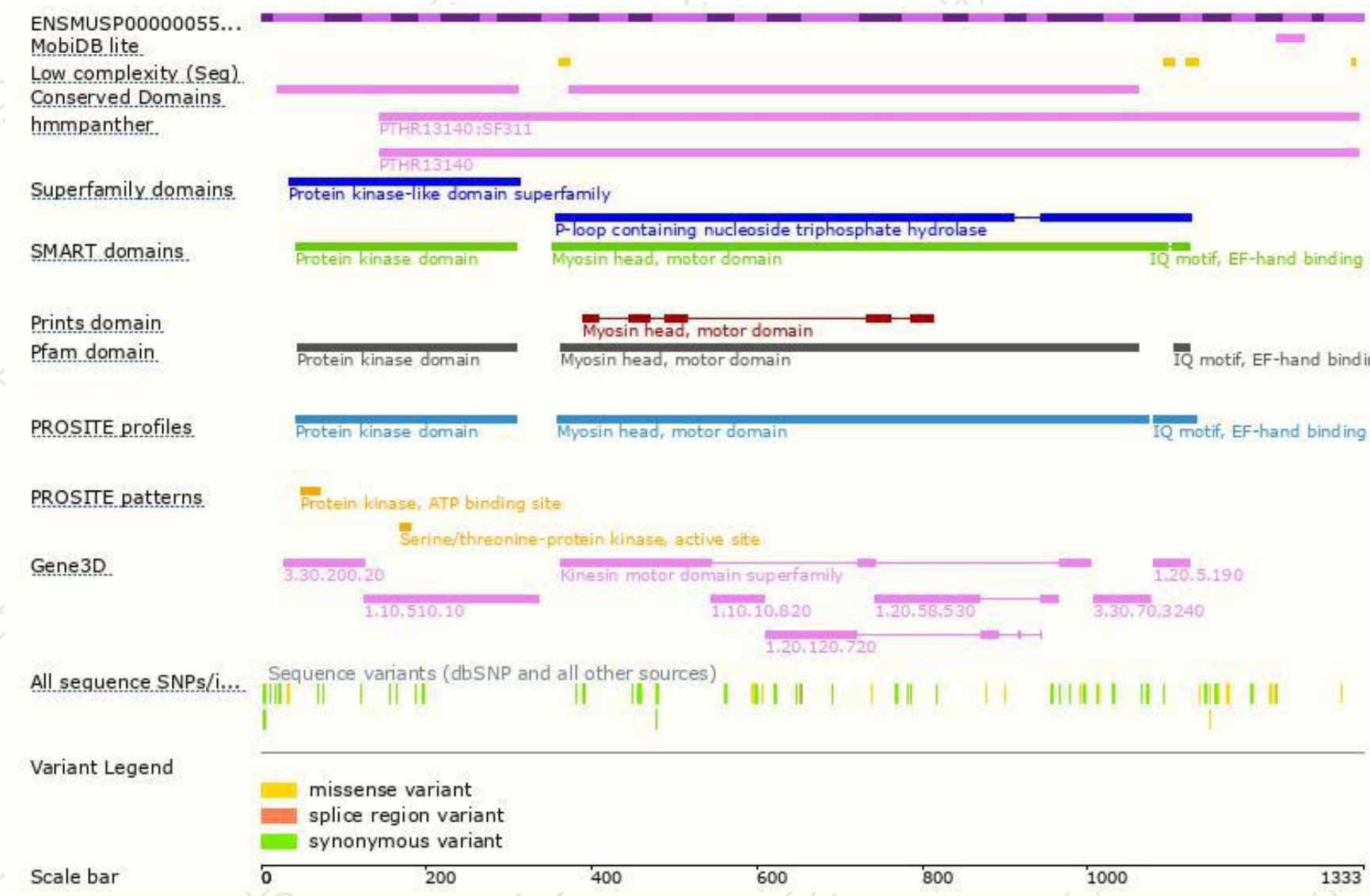
Genomic location distribution



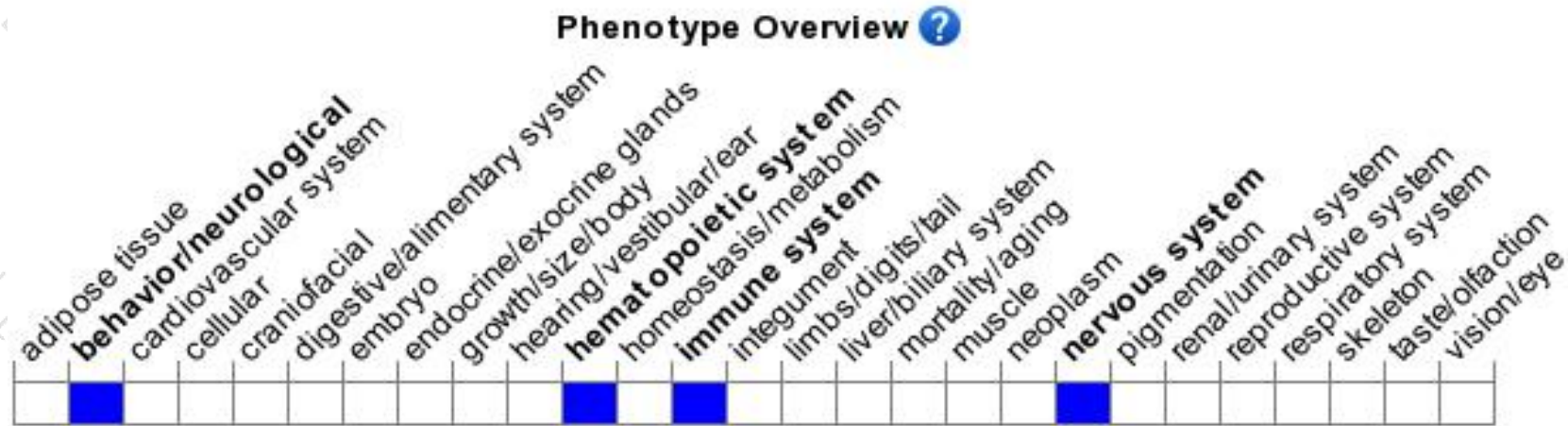
Protein domain



集萃药康
GemPharmatech



Mouse phenotype description(MGI)



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

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

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