

Igfbp6 Cas9-KO Strategy

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Reviewer:

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Project Overview

Project Name

Igfbp6

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Igfbp6* gene. The schematic diagram is as follows:



- The *Igfbp6* gene has 1 transcript. According to the structure of *Igfbp6* gene, exon1 of *Igfbp6-201* (ENSMUST00000023807.6) transcript is recommended as the knockout region. The region contains start codon ATG. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Igfbp6* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Igfbp6* 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.

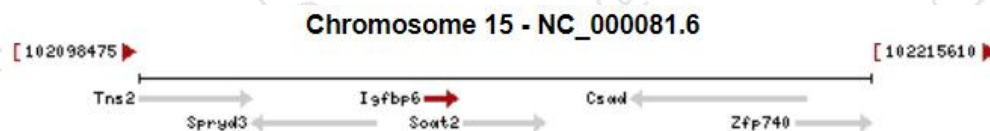
Gene information (NCBI)

Igfbp6 insulin-like growth factor binding protein 6 [*Mus musculus* (house mouse)]

Gene ID: 16012, updated on 12-Aug-2019

Summary

Official Symbol	Igfbp6 provided by MGI
Official Full Name	insulin-like growth factor binding protein 6 provided by MGI
Primary source	MGI:MGI:96441
See related	Ensembl:ENSMUSG00000023046
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	IGFBP-6
Expression	Broad expression in lung adult (RPKM 124.7), ovary adult (RPKM 109.7) and 15 other tissues See more
Orthologs	human all

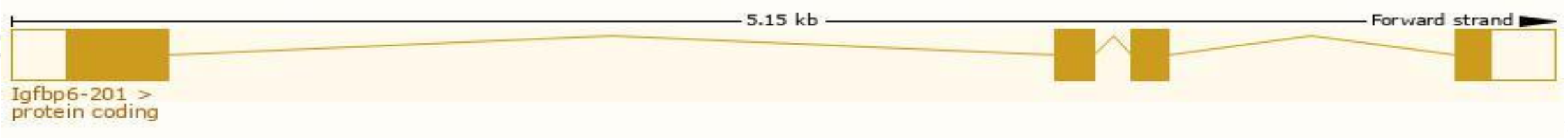


Transcript information (Ensembl)

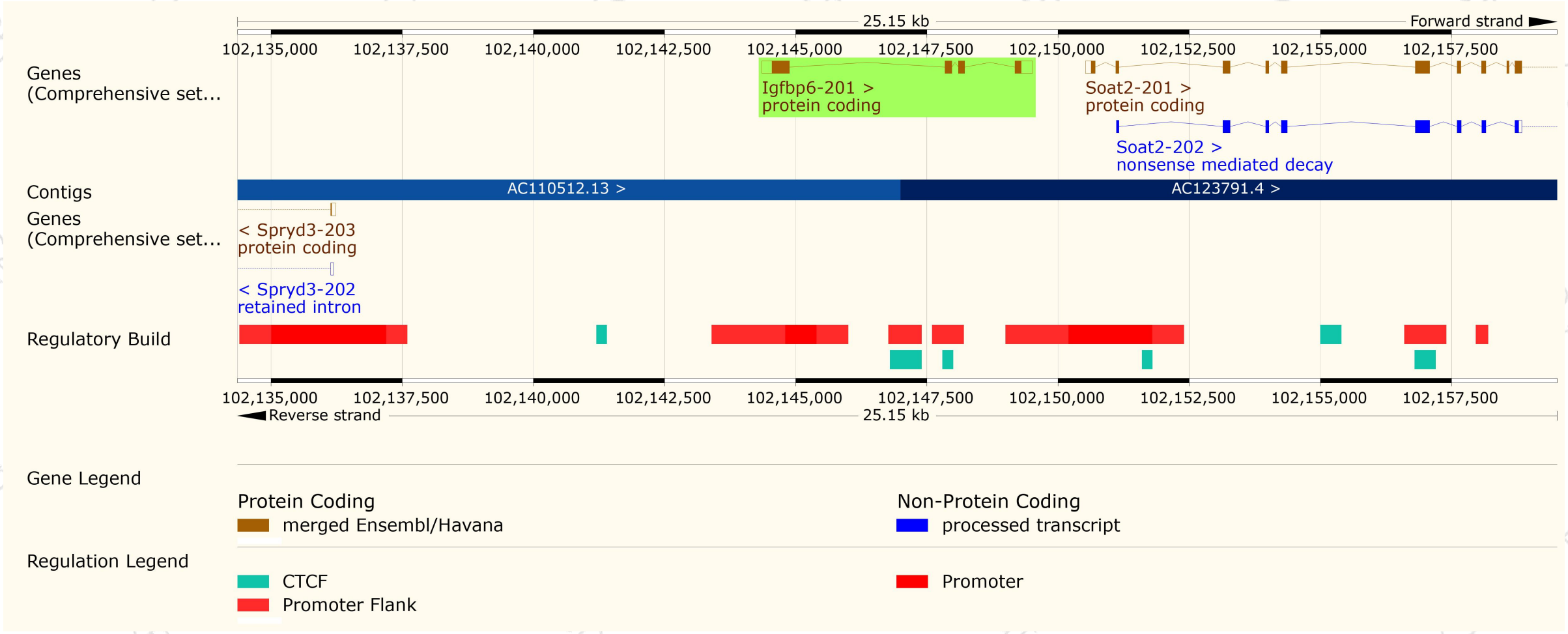
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Translation ID	Biotype	CCDS	UniProt	Flags
Igfbp6-201	ENSMUST00000023807.6	1112	238aa	ENSMUSP00000023807.6	Protein coding	CCDS27871	P47880	TSL:1 Gencode basic APPRIS P1

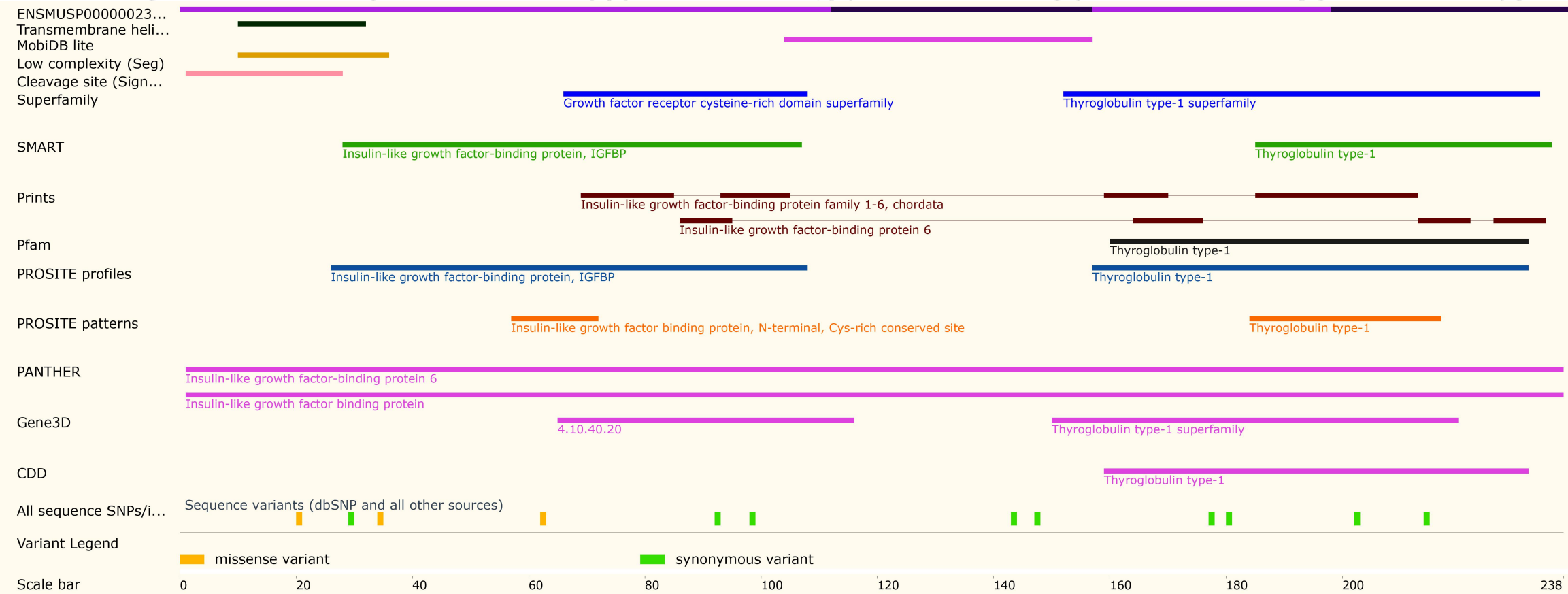
The strategy is based on the design of *Igfbp6-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

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