

Igdcc4 Cas9-KO Strategy

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Project Overview

Project Name

Igdcc4

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Igdcc4* gene. The schematic diagram is as follows:



- The *Igdcc4* gene has 7 transcripts. According to the structure of *Igdcc4* gene, exon2-exon3 of *Igdcc4-201* (ENSMUST00000035499.4) transcript is recommended as the knockout region. The region contains 496bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Igdcc4* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Igdcc4* gene is located on the Chr9. 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)

Igdcc4 immunoglobulin superfamily, DCC subclass, member 4 [*Mus musculus* (house mouse)]

Gene ID: 56741, updated on 24-Oct-2019

Summary

Official Symbol	Igdcc4 provided by MGI
Official Full Name	immunoglobulin superfamily, DCC subclass, member 4 provided by MGI
Primary source	MGI:MGI:1858497
See related	Ensembl:ENSMUSG00000032816
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	Nope; DDM36
Expression	Broad expression in limb E14.5 (RPKM 23.8), ovary adult (RPKM 16.8) and 21 other tissues See more
Orthologs	human all

Genomic context

Location: 9; 9 C

Exon count: 23

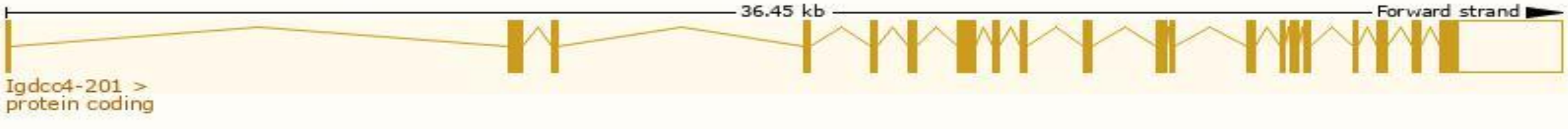
See Igdcc4 in [Genome Data Viewer](#)

Transcript information (Ensembl)

The gene has 7 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Igdcc4-201	ENSMUST00000035499.4	6223	1253aa	Protein coding	CCDS72258	Q9EQS9	TSL:1 GENCODE basic APPRIS P2
Igdcc4-202	ENSMUST00000077696.12	6361	1299aa	Protein coding	-	E9QAQ0	TSL:5 GENCODE basic
Igdcc4-205	ENSMUST00000213533.1	6220	1252aa	Protein coding	-	Q9EQS9	TSL:1 GENCODE basic APPRIS ALT2
Igdcc4-203	ENSMUST00000166273.1	778	241aa	Protein coding	-	A0JNS2	TSL:1 GENCODE basic
Igdcc4-206	ENSMUST00000214978.1	4130	No protein	Retained intron	-	-	TSL:2
Igdcc4-204	ENSMUST00000213423.1	2572	No protein	Retained intron	-	-	TSL:5
Igdcc4-207	ENSMUST00000216542.1	1131	No protein	lncRNA	-	-	TSL:1

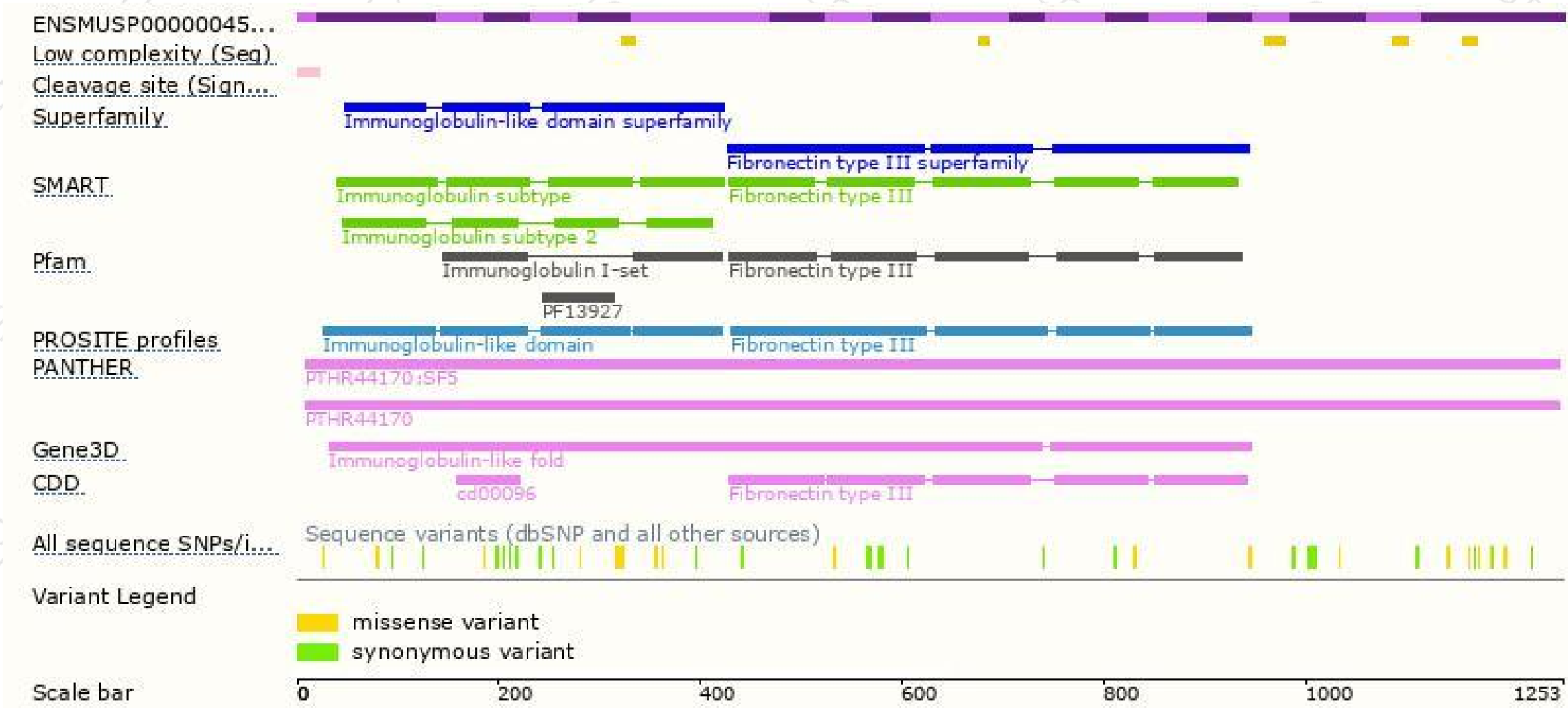
The strategy is based on the design of *Igdcc4-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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