

Inpp5j Cas9-KO Strategy

Designer: Daohua Xu

Reviewer: Huimin Su

Design Date: 2020-3-30

Project Overview

Project Name

Inpp5j

Project type

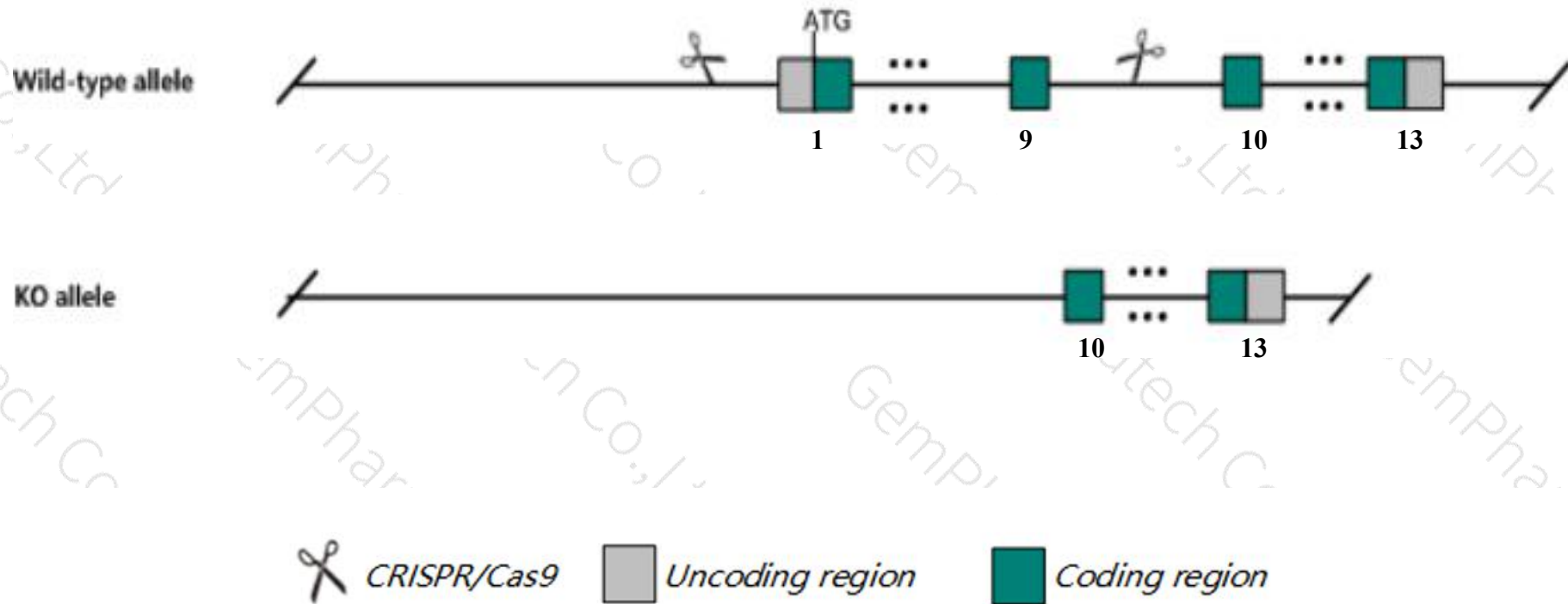
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Inpp5j* gene. The schematic diagram is as follows:



- The *Inpp5j* gene has 6 transcripts. According to the structure of *Inpp5j* gene, exon1-exon9 of *Inpp5j-201* (ENSMUST00000044507.11) 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 *Inpp5j* gene. The brief process is as follows: CRISPR/Cas9 system

Notice

- The KO region contains functional region of the *Pla2g3* gene. Knockout the region may affect the function of *Pla2g3* gene.
- The *Inpp5j* gene is located on the Chr11. 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)

Inpp5j inositol polyphosphate 5-phosphatase J [*Mus musculus* (house mouse)]

Gene ID: 170835, updated on 13-Mar-2020

Summary

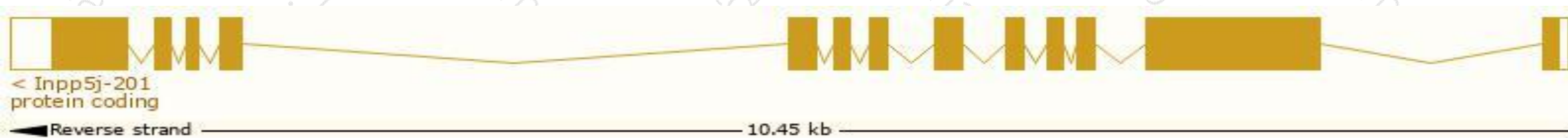
Official Symbol	Inpp5j provided by MGI
Official Full Name	inositol polyphosphate 5-phosphatase J provided by MGI
Primary source	MGI:MGI:2158663
See related	Ensembl:ENSMUSG00000034570
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Pipp; Pib5pa
Expression	Biased expression in colon adult (RPKM 37.0), frontal lobe adult (RPKM 26.8) and 8 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

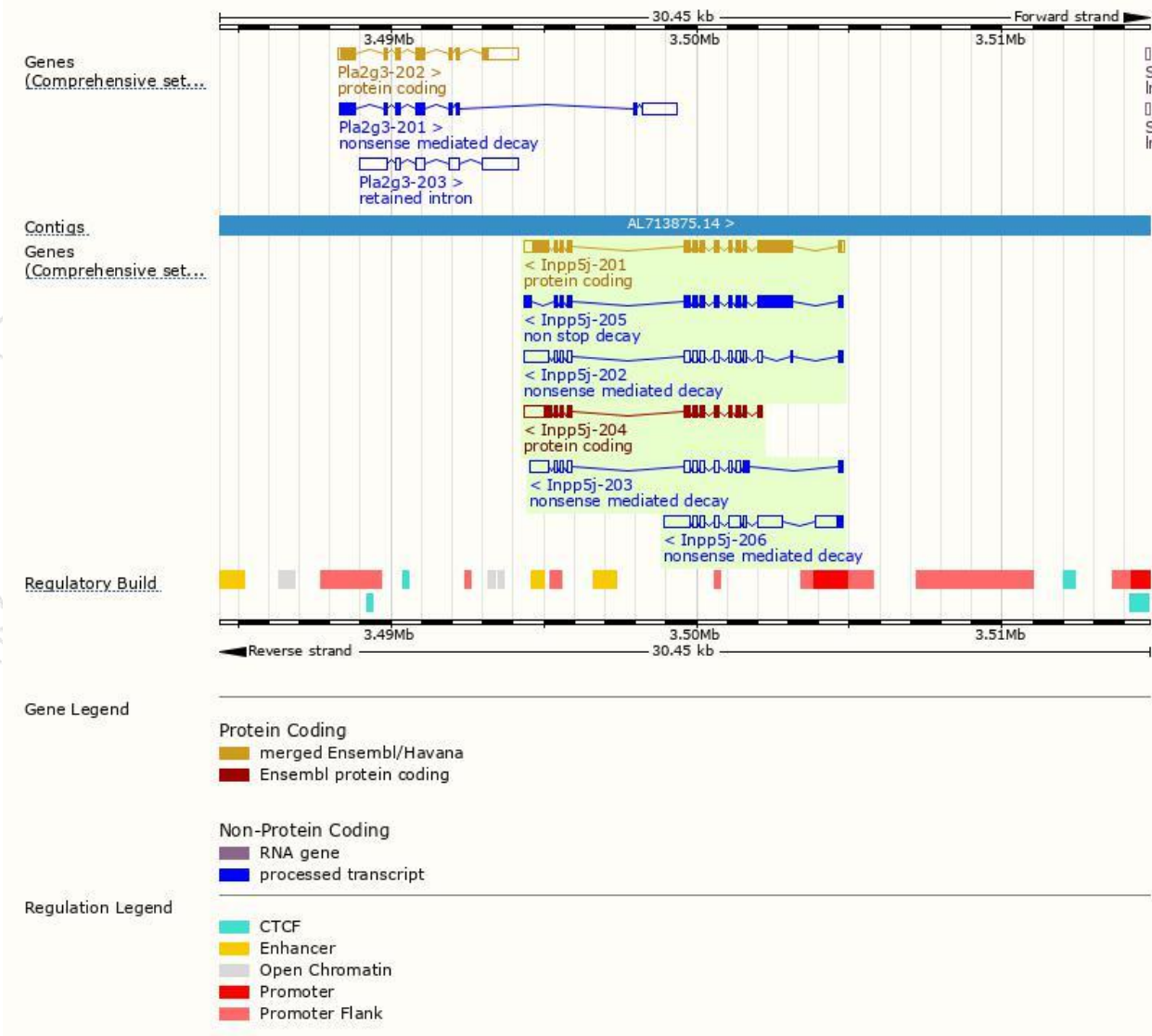
The gene has 6 transcripts, all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Inpp5j-201	ENSMUST00000044507.11	3370	1003aa	Protein coding	CCDS24364	P59644	TSL:1 Gencode basic APPRIS P1
Inpp5j-204	ENSMUST00000148939.7	2271	548aa	Protein coding	-	V9GXL7	CDS 5' incomplete TSL:1
Inpp5j-205	ENSMUST00000154756.1	2724	899aa	Non stop decay	-	A0A075B6D7	TSL:1
Inpp5j-206	ENSMUST00000183684.1	3433	41aa	Nonsense mediated decay	-	V9GX61	TSL:2
Inpp5j-202	ENSMUST00000110018.7	2384	57aa	Nonsense mediated decay	-	D3Z3Q0	TSL:5
Inpp5j-203	ENSMUST00000110019.8	2091	97aa	Nonsense mediated decay	-	D3Z3P9	TSL:5

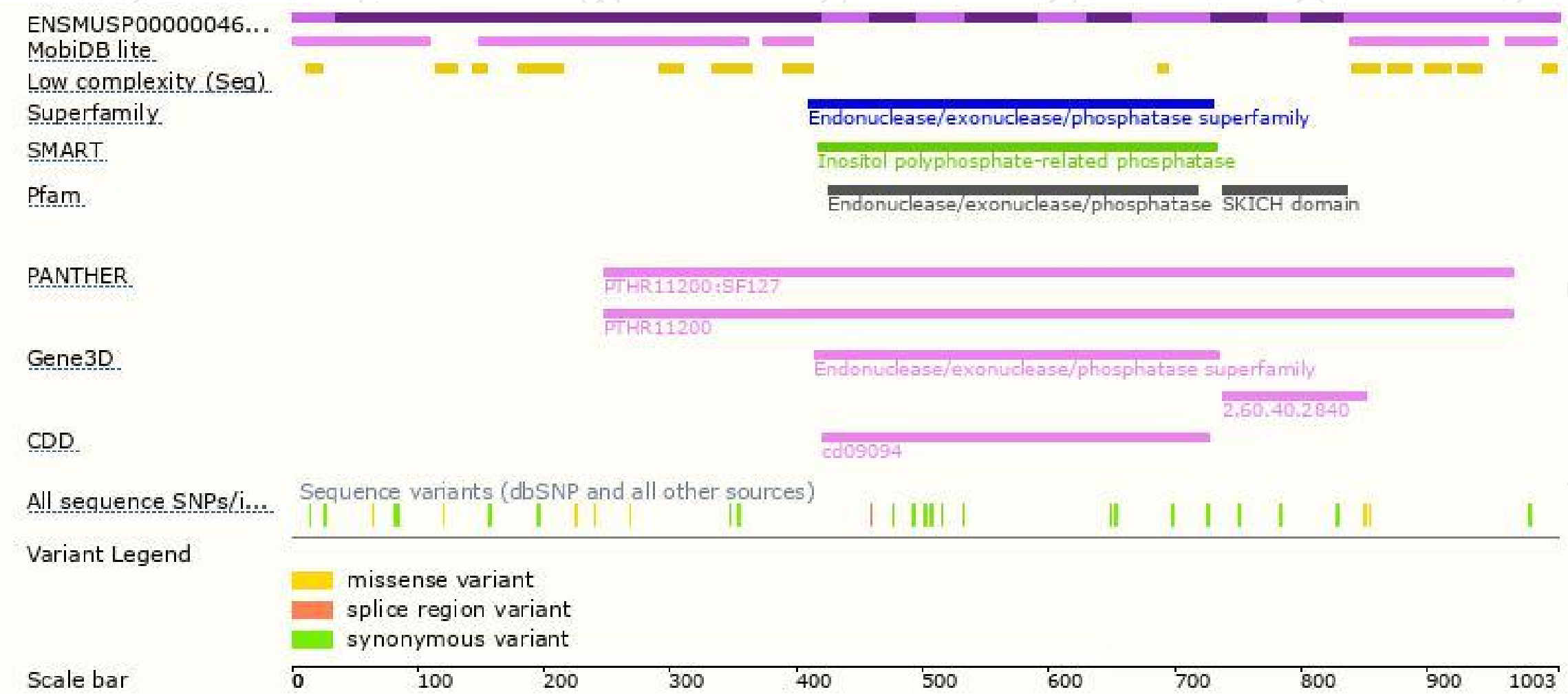
The strategy is based on the design of *Inpp5j-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

