

Pygo1 Cas9-KO Strategy

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Project Overview

Project Name

Pygo1

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Pygo1* gene. The schematic diagram is as follows:



- The *Pygo1* gene has 1 transcript. According to the structure of *Pygo1* gene, exon2 of *Pygo1-201* (ENSMUST00000038489.5) transcript is recommended as the knockout region. The region contains 86bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Pygo1* gene. The brief process is as follows: CRISPR/Cas9 system

- According to the existing MGI data, Homozygous null mice are viable and show no obvious phenotype.
- The *Pygo1* 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)

Pygo1 pygopus 1 [Mus musculus (house mouse)]

Gene ID: 72135, updated on 31-Jan-2019

Summary



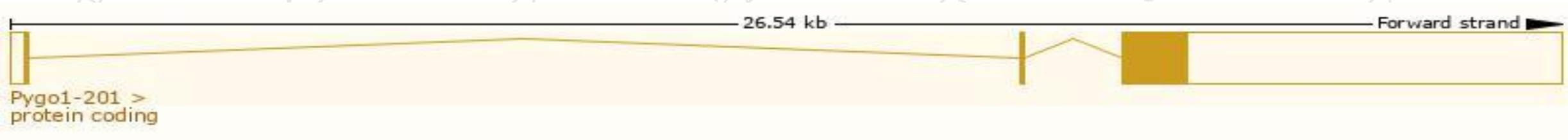
Official Symbol	Pygo1 provided by MGI
Official Full Name	pygopus 1 provided by MGI
Primary source	MGI:MGI:1919385
See related	Ensembl:ENSMUSG00000034910
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2600014C22Rik
Expression	Broad expression in limb E14.5 (RPKM 7.4), whole brain E14.5 (RPKM 6.5) and 16 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

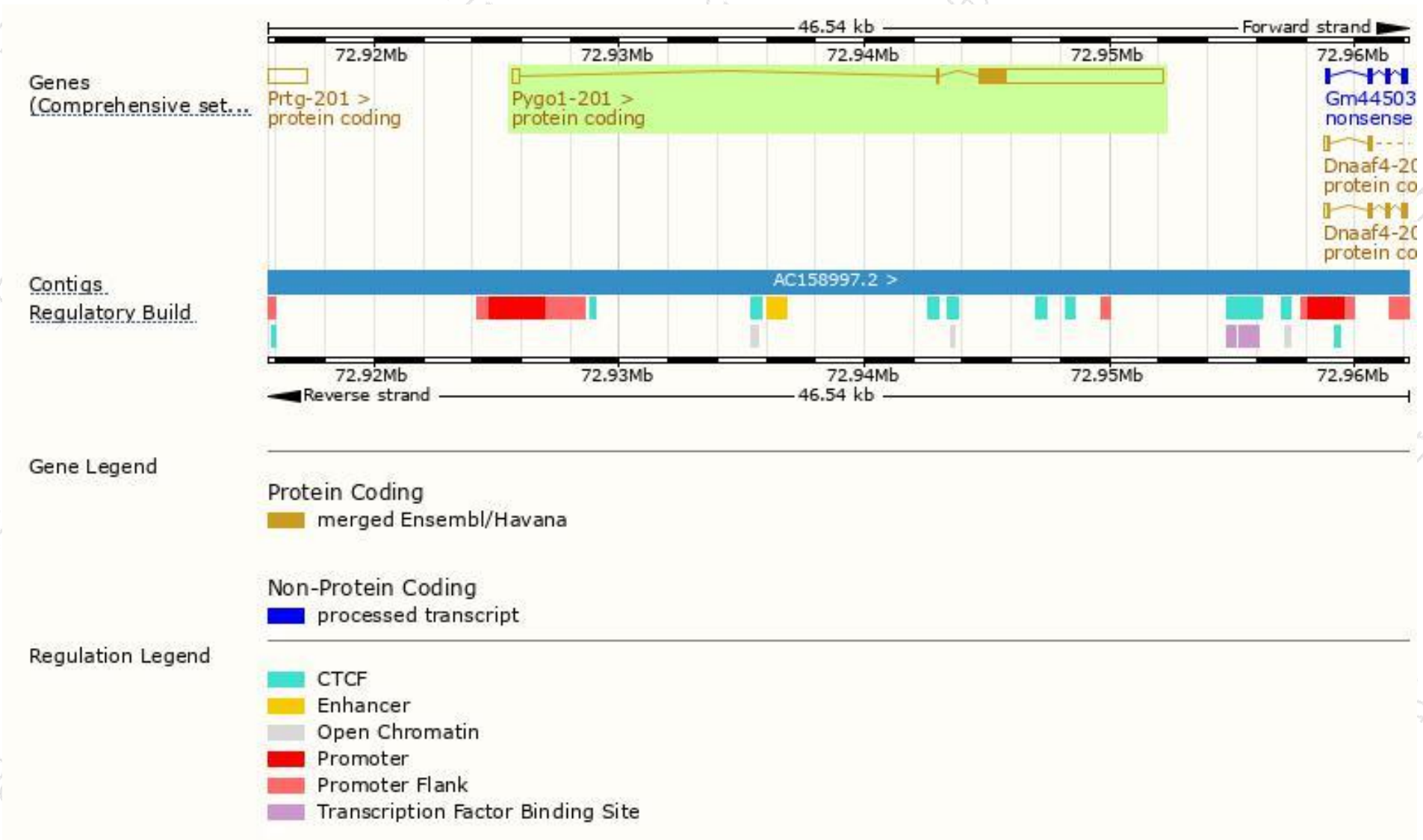
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Pygo1-201	ENSMUST00000038489.5	7916	417aa	Protein coding	CCDS23332	Q1JPR5 Q9D0P5	TSL:1 GENCODE basic APPRIS P1

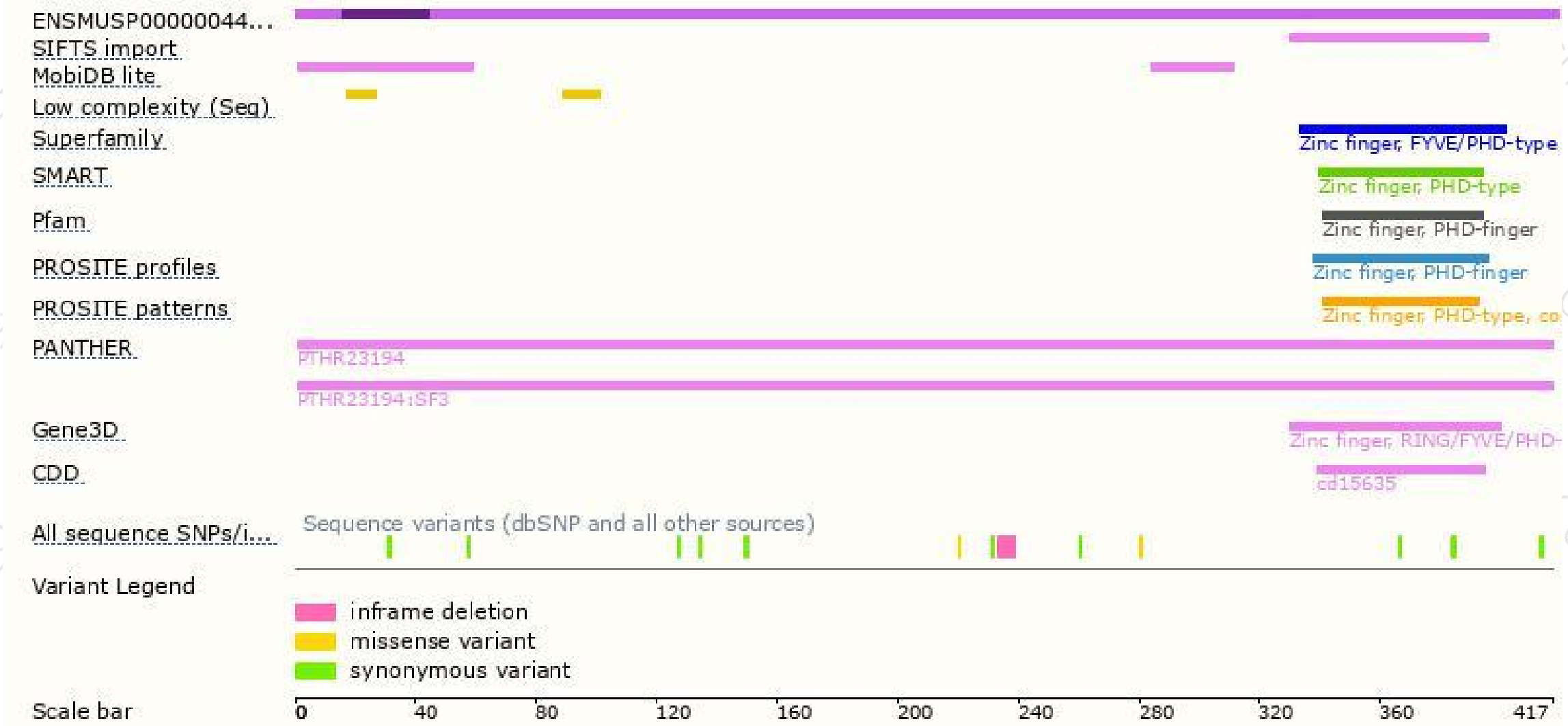
The strategy is based on the design of *Pygo1-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

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