

Pex6 Cas9-KO Strategy

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Date: 2020-03-10

Project Overview

Project Name

Pex6

Project type

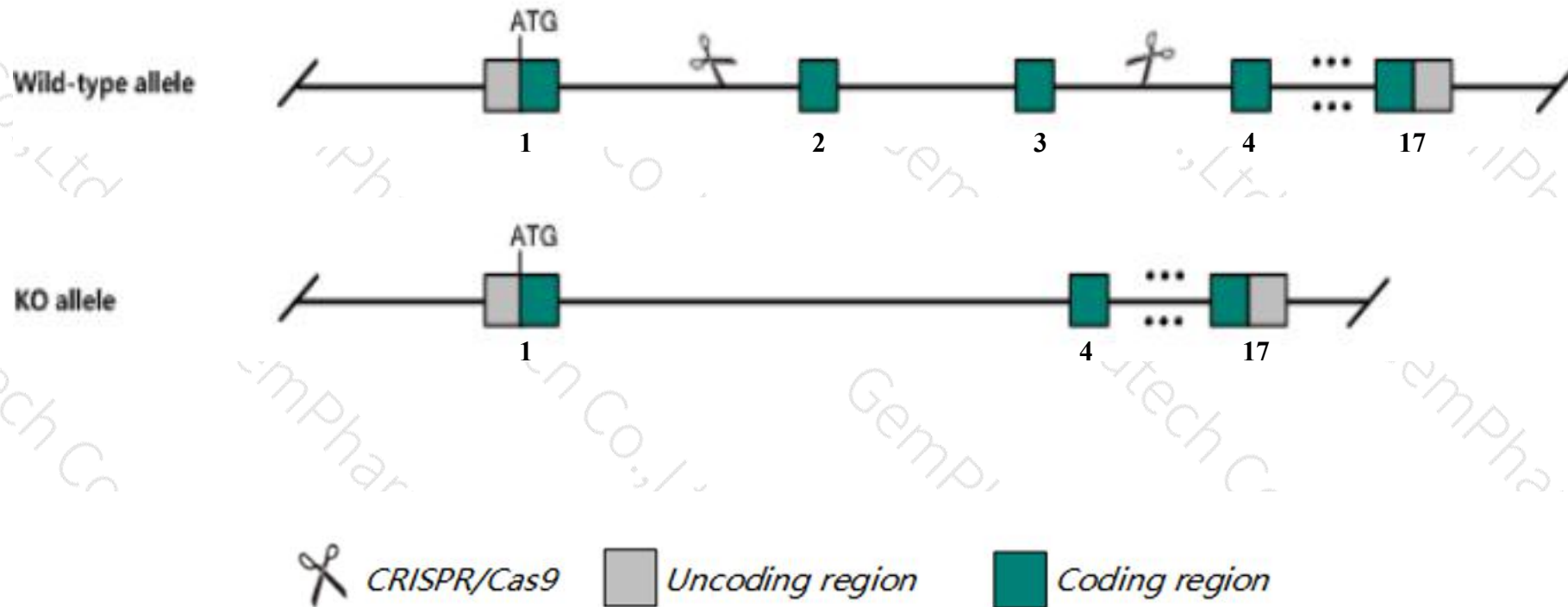
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Pex6* gene. The schematic diagram is as follows:



- The *Pex6* gene has 4 transcripts. According to the structure of *Pex6* gene, exon2-exon3 of *Pex6-201* (ENSMUST00000002840.8) transcript is recommended as the knockout region. The region contains 248bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Pex6* gene. The brief process is as follows: CRISPR/Cas9 system v

- Transcript *Pex6*-204 may not be affected.
- The *Pex6* gene is located on the Chr17. 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)

Pex6 peroxisomal biogenesis factor 6 [*Mus musculus* (house mouse)]

Gene ID: 224824, updated on 17-Sep-2019

Summary

Official Symbol	Pex6 provided by MGI
Official Full Name	peroxisomal biogenesis factor 6 provided by MGI
Primary source	MGI:MGI:2385054
See related	Ensembl:ENSMUSG000000002763
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	PAF-2; AI132582; D130055I09Rik
Expression	Ubiquitous expression in adrenal adult (RPKM 85.9), ovary adult (RPKM 56.9) and 28 other tissues See more
Orthologs	human all

Genomic context

Location: 17; 17 C

See Pex6 in [Genome Data Viewer](#)

Exon count: 17

Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	17	NC_000083.6 (46711476..46725543)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	17	NC_000083.5 (46848412..46862490)

Transcript information (Ensembl)

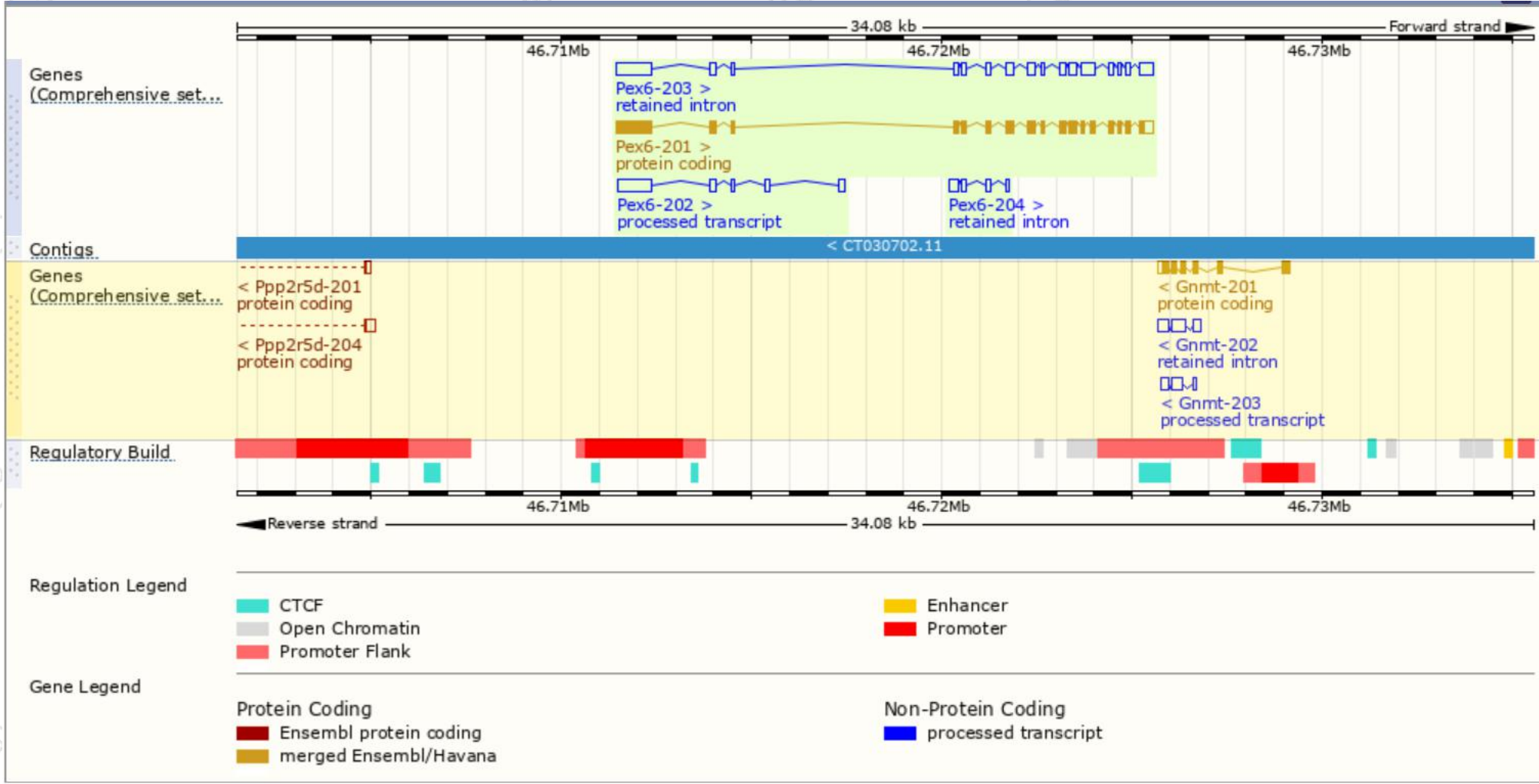
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Pex6-201	ENSMUST00000002840.8	3200	981aa	Protein coding	CCDS28837	Q99LC9	TSL:1 GENCODE basic APPRIS P1
Pex6-203	ENSMUST00000144964.7	3383	No protein	Retained intron	-	-	TSL:1
Pex6-204	ENSMUST00000148872.1	551	No protein	Retained intron	-	-	TSL:3
Pex6-202	ENSMUST00000127897.1	1453	No protein	lncRNA	-	-	TSL:1

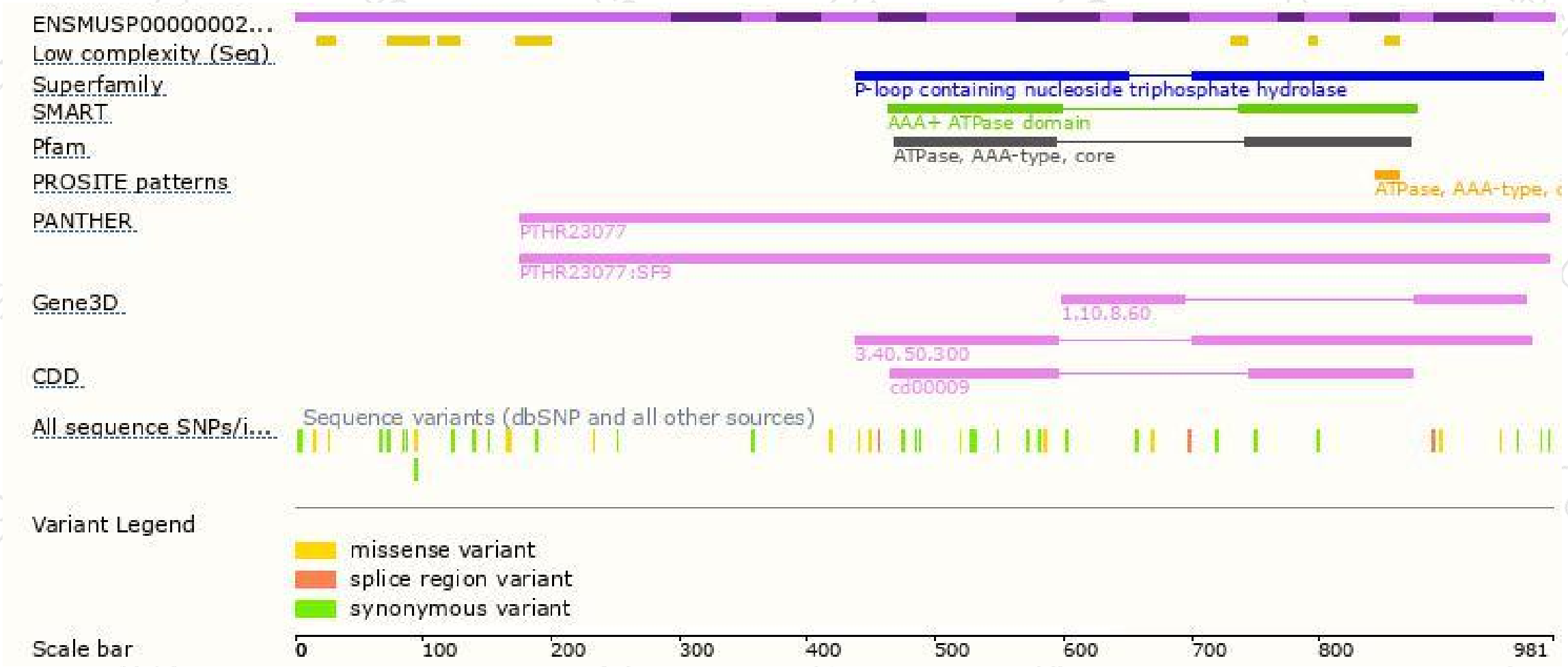
The strategy is based on the design of *Pex6-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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