

Pex19 Cas9-KO Strategy

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Project Overview

Project Name

Pex19

Project type

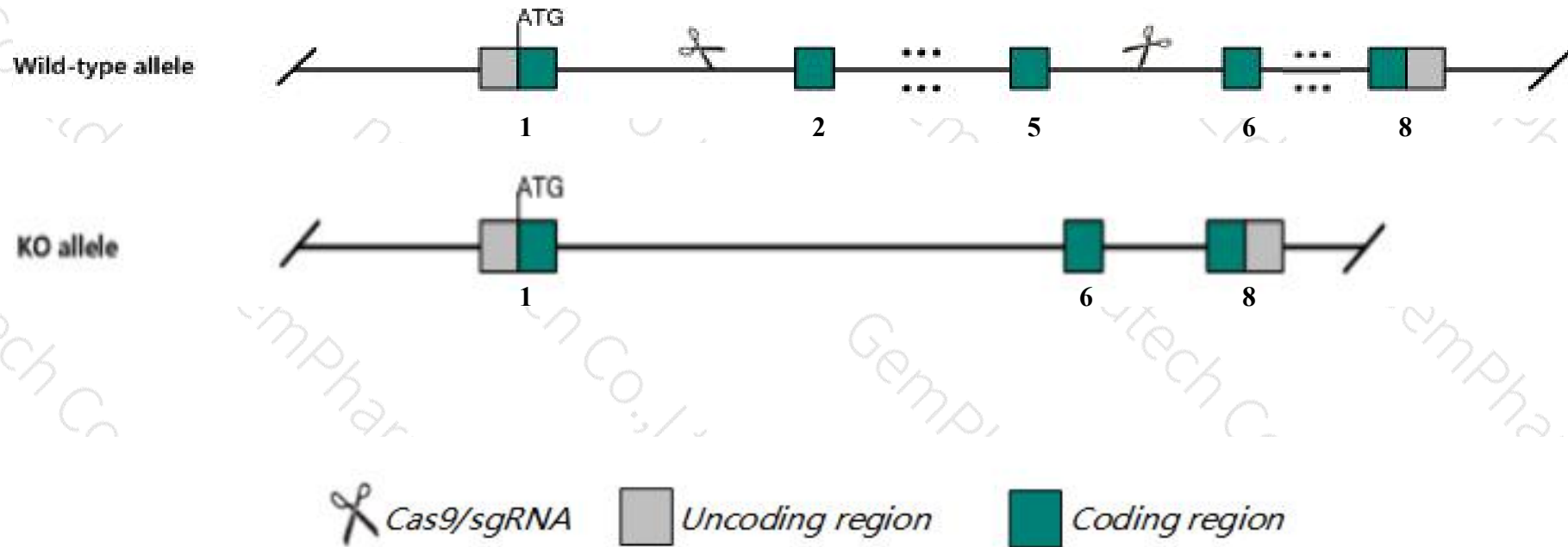
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Pex19* gene. The schematic diagram is as follows:



- The *Pex19* gene has 6 transcripts. According to the structure of *Pex19* gene, exon2-exon5 of *Pex19-201* (ENSMUST00000075895.8) transcript is recommended as the knockout region. The region contains 524bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Pex19* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Pex19* gene is located on the Chr1. 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)

Pex19 peroxisomal biogenesis factor 19 [Mus musculus (house mouse)]

Gene ID: 19298, updated on 31-Jan-2019

Summary



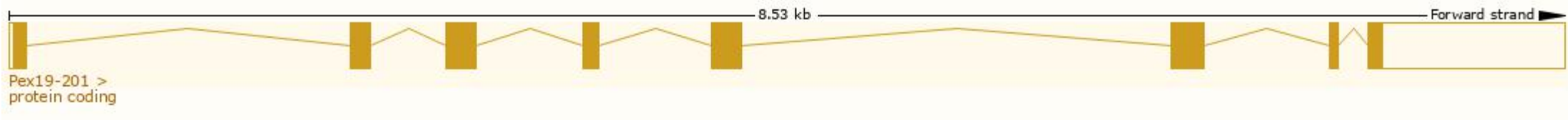
Official Symbol	Pex19 provided by MGI
Official Full Name	peroxisomal biogenesis factor 19 provided by MGI
Primary source	MGI:MGI:1334458
See related	Ensembl:ENSMUSG000000003464
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Pxf
Expression	Ubiquitous expression in subcutaneous fat pad adult (RPKM 42.2), mammary gland adult (RPKM 35.7) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

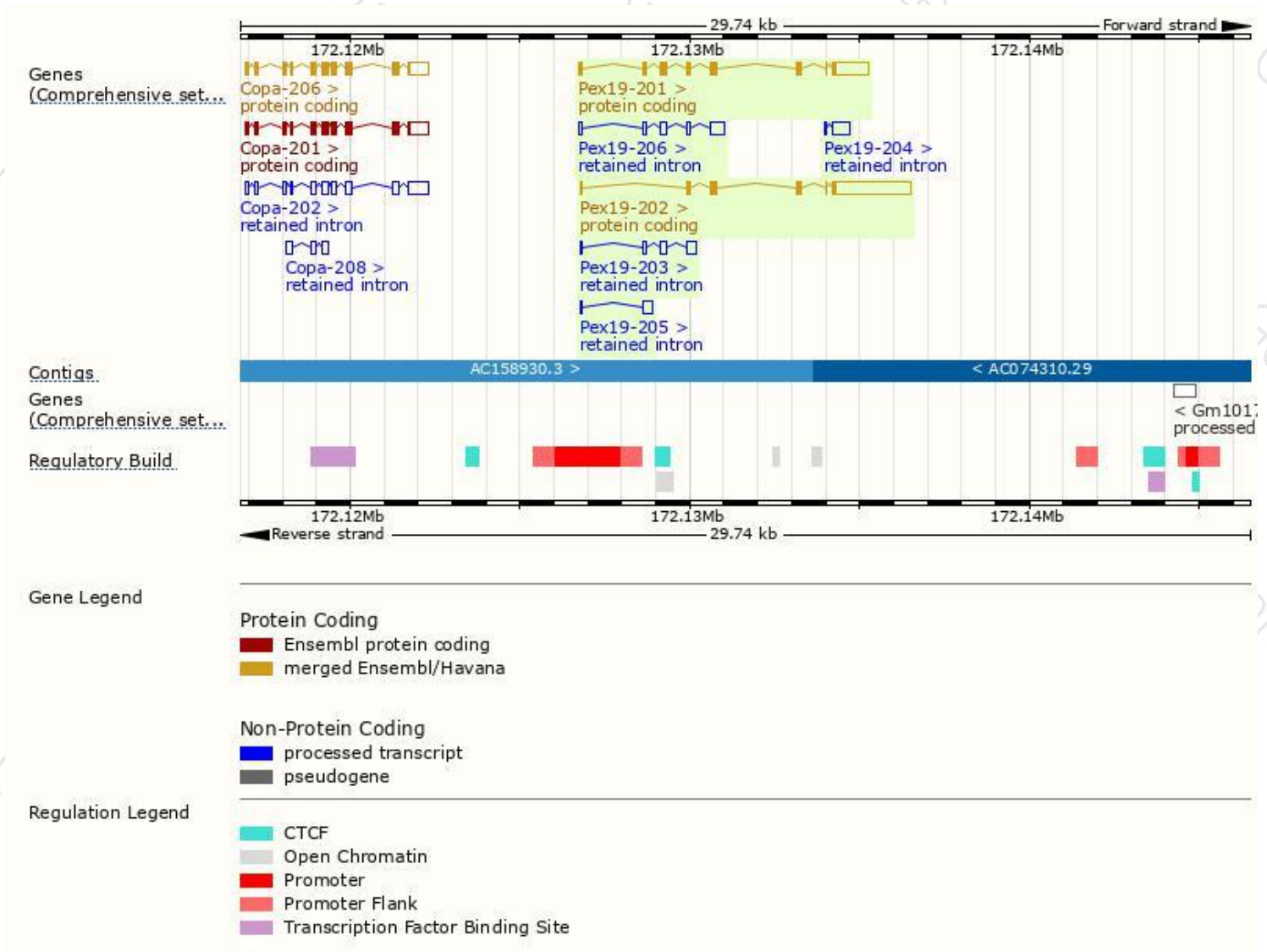
The gene has 6 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Pex19-202	ENSMUST00000111252.3	2844	207aa	Protein coding	CCDS48445	Q8VCI5	TSL:1 GENCODE basic
Pex19-201	ENSMUST00000075895.8	1917	299aa	Protein coding	CCDS15508	Q8VCI5	TSL:1 GENCODE basic APPRIS P1
Pex19-206	ENSMUST00000147799.7	855	No protein	Retained intron	-	-	TSL:2
Pex19-203	ENSMUST00000127662.1	642	No protein	Retained intron	-	-	TSL:3
Pex19-204	ENSMUST00000133081.1	599	No protein	Retained intron	-	-	TSL:3
Pex19-205	ENSMUST00000133546.7	368	No protein	Retained intron	-	-	TSL:2

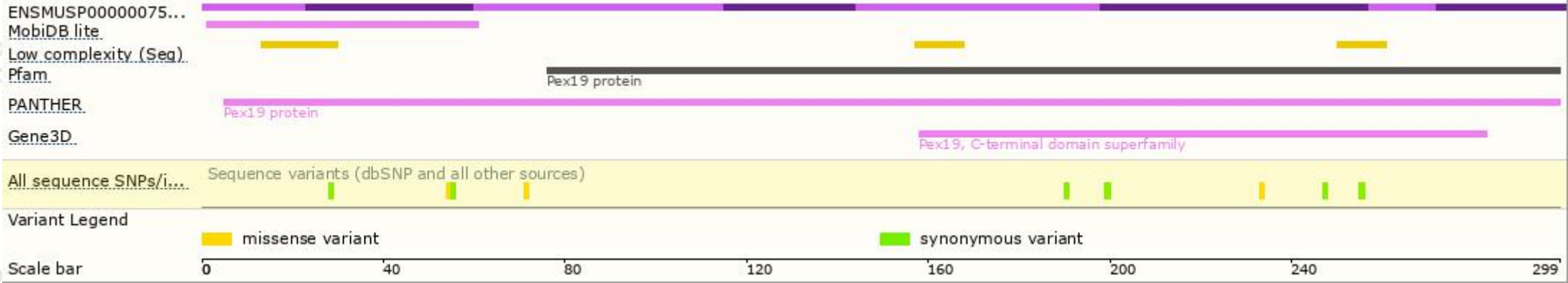
The strategy is based on the design of *Pex19-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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