

Pex11g Cas9-KO Strategy

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Project Overview

Project Name

Pex11g

Project type

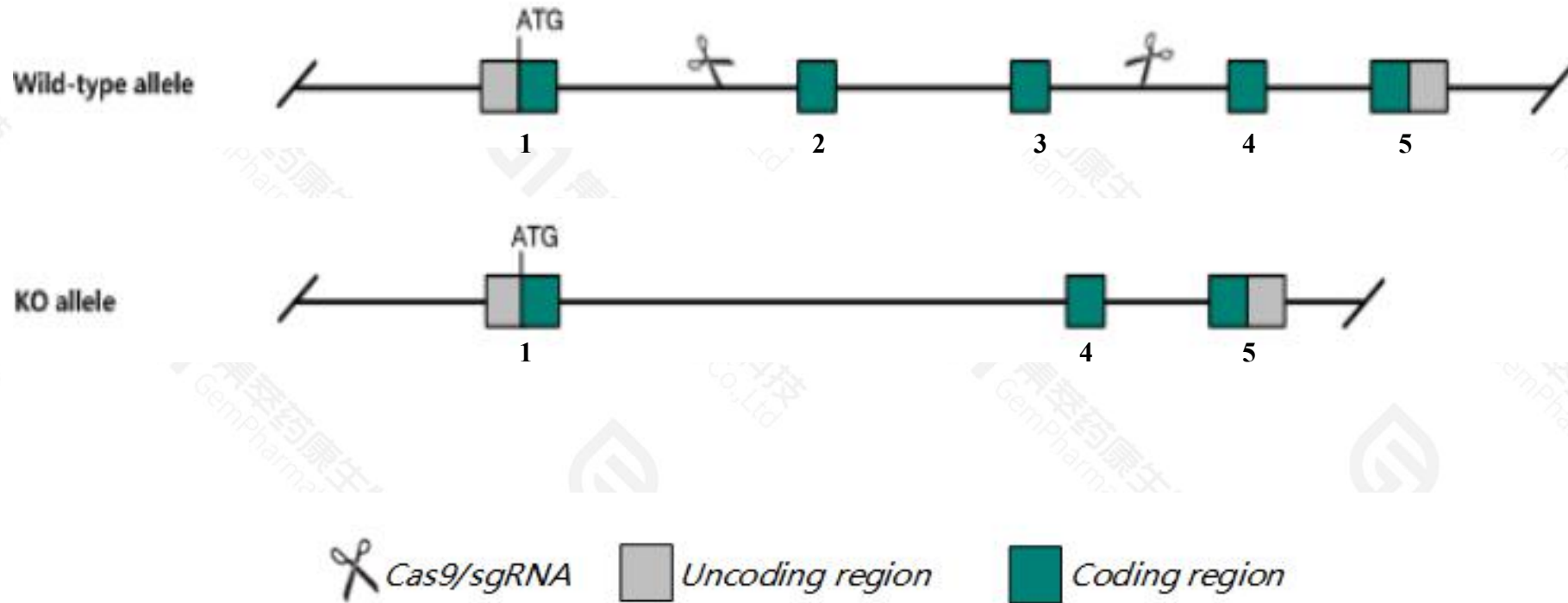
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Pex11g* gene. The schematic diagram is as follows:



- The *Pex11g* gene has 3 transcripts. According to the structure of *Pex11g* gene, exon2-exon3 of *Pex11g*-201(ENSMUST00000004686.12) transcript is recommended as the knockout region. The region contains 368bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Pex11g* gene. The brief process is as follows: sgRNA was transcribed in vitro. Cas9 and sgRNA were microinjected into the fertilized eggs of C57BL/6JGpt mice. Fertilized eggs were transplanted to obtain positive F0 mice which were confirmed by PCR and sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6JGpt mice.

- The *Pex11g* gene is located on the Chr8. 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.

Pex11g peroxisomal biogenesis factor 11 gamma [Mus musculus (house mouse)]

Gene ID: 69129, updated on 13-Mar-2020

Summary



Official Symbol Pex11g provided by [MGI](#)

Official Full Name peroxisomal biogenesis factor 11 gamma provided by [MGI](#)

Primary source [MGI:MGI:1920905](#)

See related [Ensembl:ENSMUSG00000069633](#)

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 1810022F11Rik, 1810049N02Rik, Pex11c, Pex11gamma

Expression Broad expression in testis adult (RPKM 14.0), liver adult (RPKM 13.6) and 25 other tissues [See more](#)

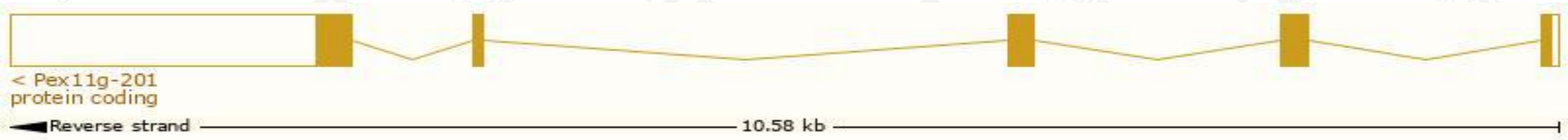
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

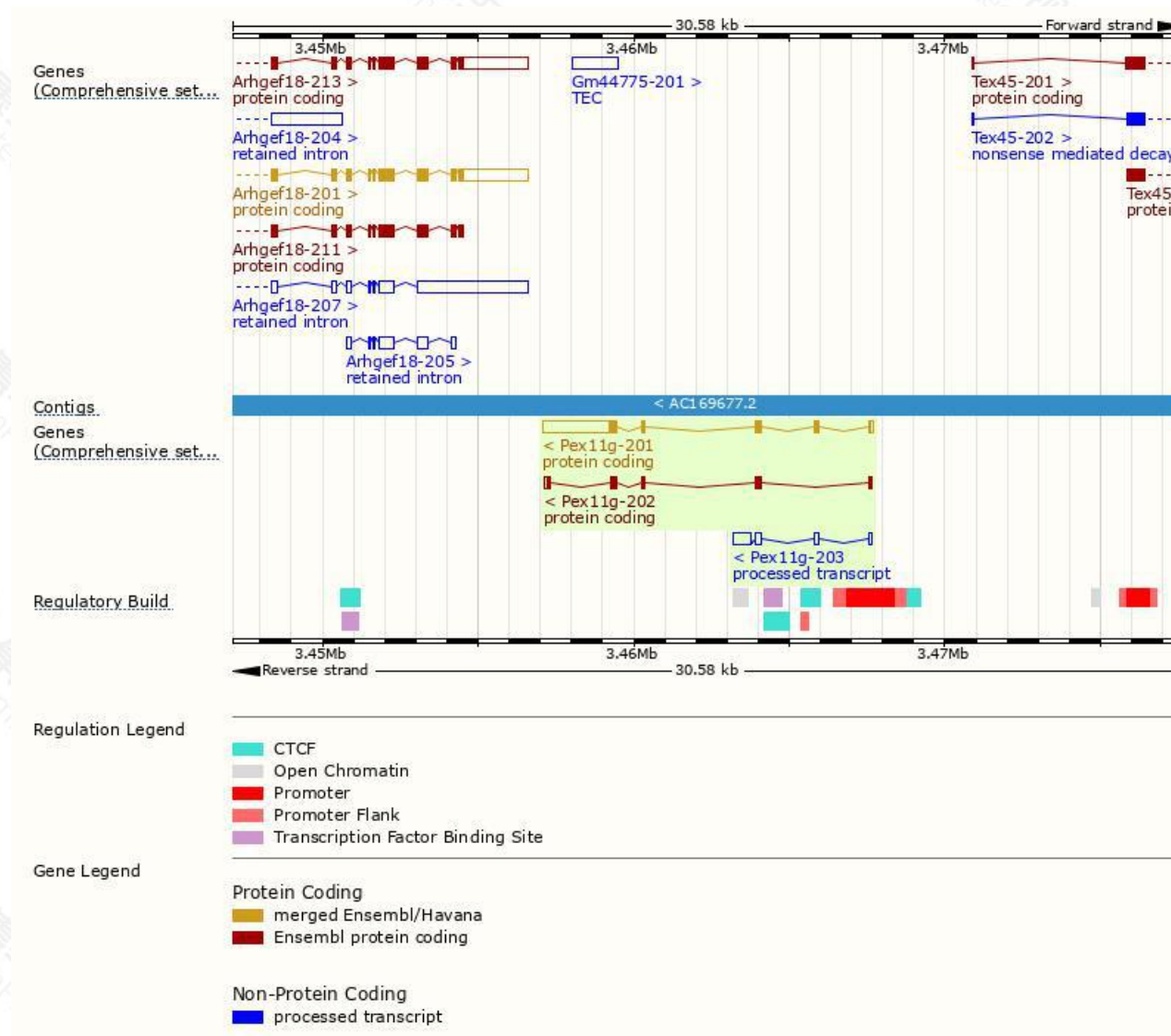
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Pex11g-201	ENSMUST00000004686.12	2870	241aa	Protein coding	CCDS22061	Q6P6M5	TSL:1 GENCODE basic APPRIS P1
Pex11g-202	ENSMUST00000111081.9	666	176aa	Protein coding	-	Q6P6M5	TSL:1 GENCODE basic
Pex11g-203	ENSMUST00000118194.1	994	No protein	Processed transcript	-	-	TSL:1

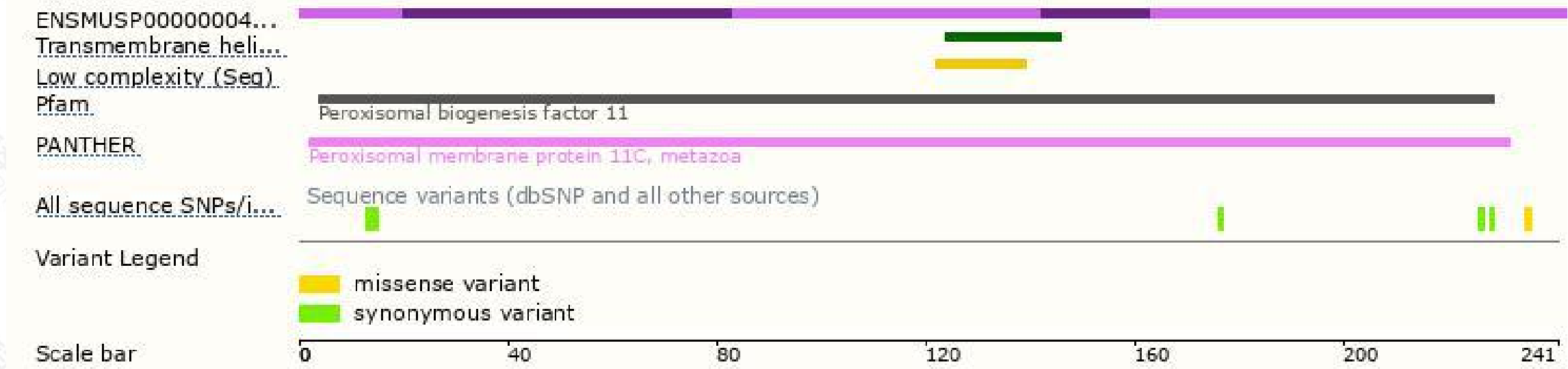
The strategy is based on the design of *Pex11g-201* transcript,the transcription is shown below:



Genomic location distribution



Protein domain



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

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