

Lgi3 Cas9-KO Strategy

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Project Overview

Project Name

Lgi3

Project type

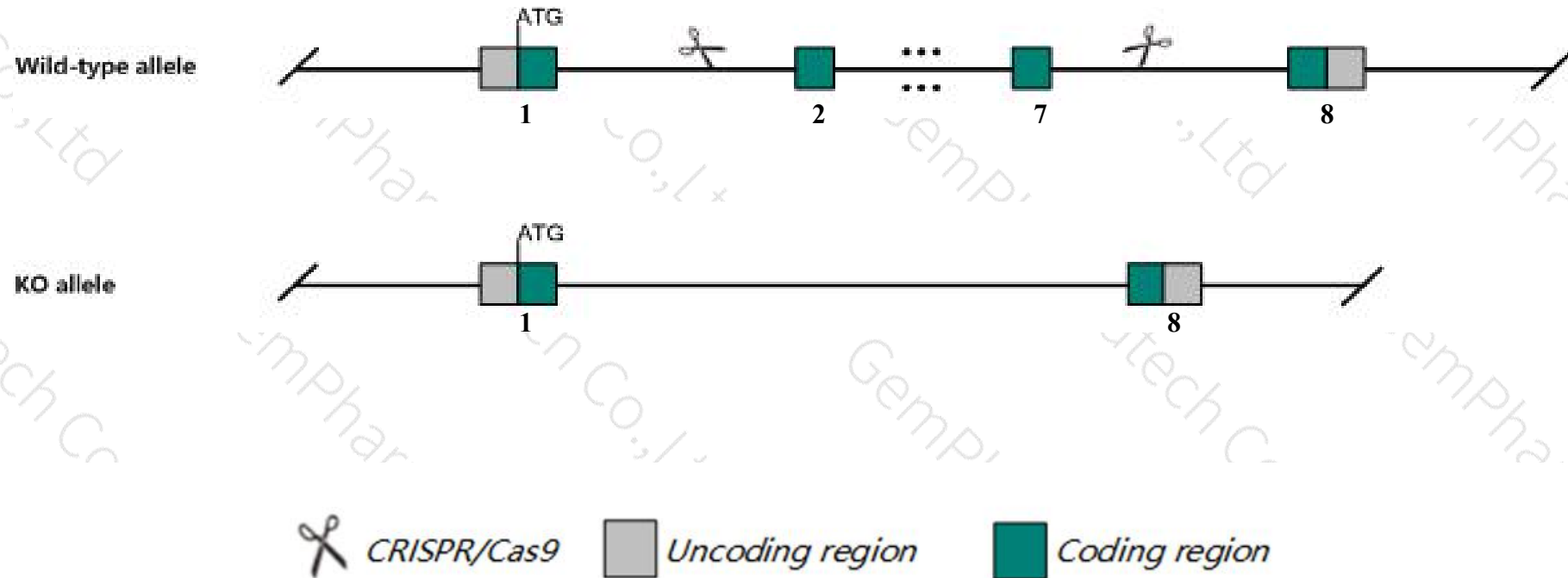
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Lgi3* gene. The schematic diagram is as follows:



- The *Lgi3* gene has 3 transcripts. According to the structure of *Lgi3* gene, exon2-exon7 of *Lgi3-201* (ENSMUST00000047331.7) transcript is recommended as the knockout region. The region contains 623bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Lgi3* gene. The brief process is as follows: CRISPR/Cas9 system w

- The *Lgi3* gene is located on the Chr14. 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)

Lgi3 leucine-rich repeat LGL family, member 3 [Mus musculus (house mouse)]

Gene ID: 213469, updated on 19-Feb-2019

Summary



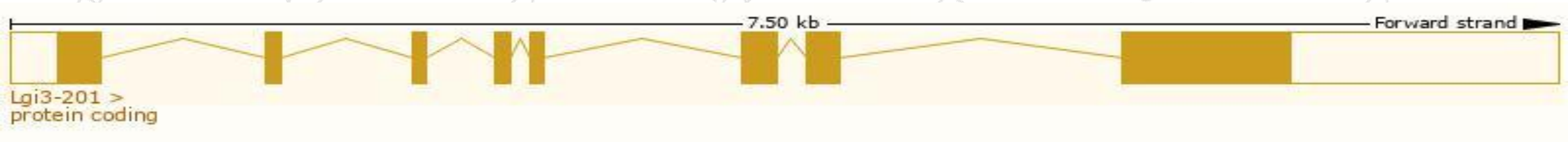
Official Symbol	Lgi3 provided by MGI
Official Full Name	leucine-rich repeat LGL family, member 3 provided by MGI
Primary source	MGI:MGI:2182619
See related	Ensembl:ENSMUSG00000033595
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	AI841179, AW049851
Expression	Biased expression in lung adult (RPKM 127.1), cerebellum adult (RPKM 61.3) and 2 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

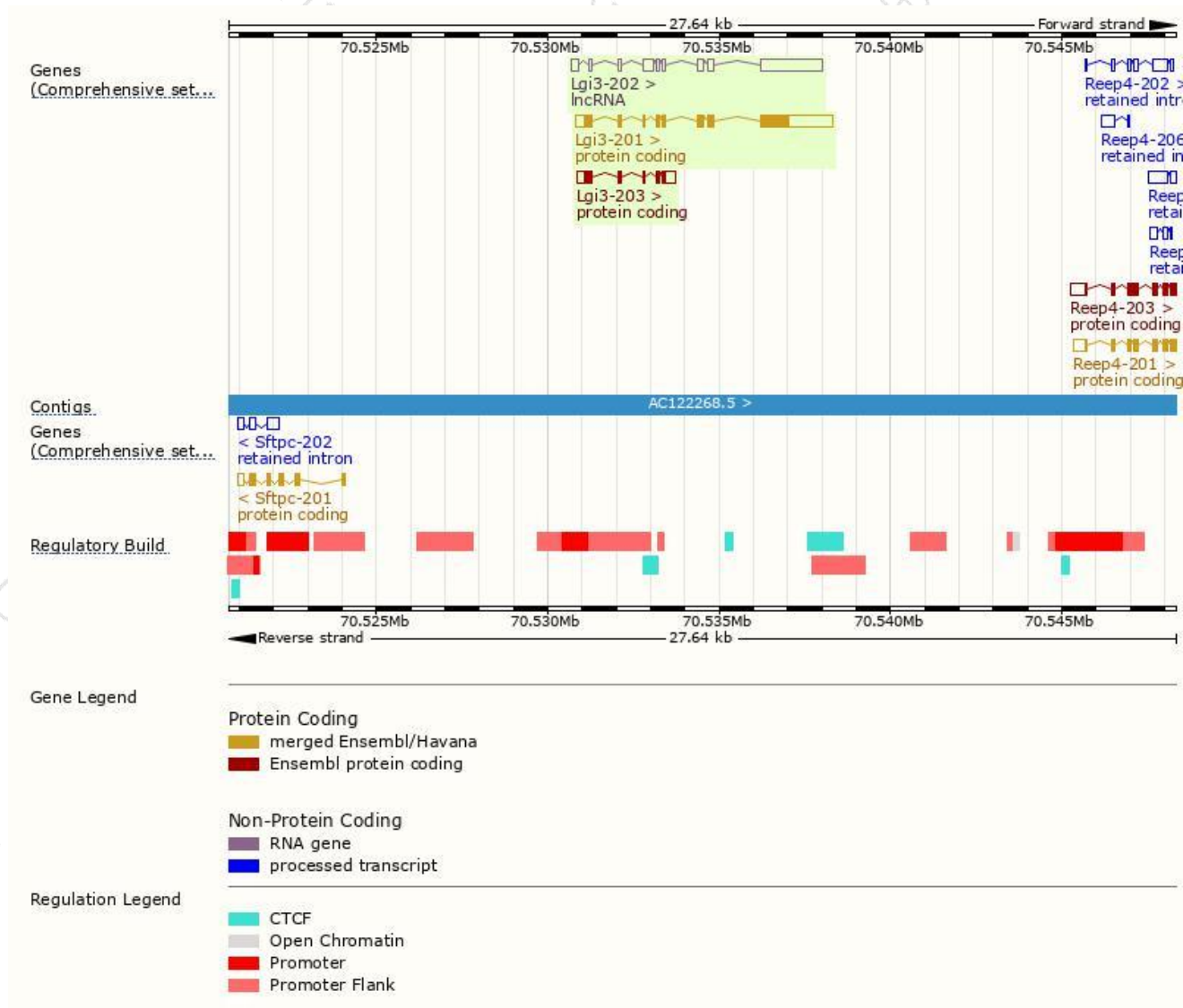
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Lgi3-201	ENSMUST00000047331.7	3174	548aa	Protein coding	CCDS27255	Q8K406	TSL:1 GENCODE basic APPRIS P1
Lgi3-203	ENSMUST00000226548.1	1001	165aa	Protein coding	-	A0A2I3BPU5	GENCODE basic
Lgi3-202	ENSMUST00000226376.1	3019	No protein	lncRNA	-	-	

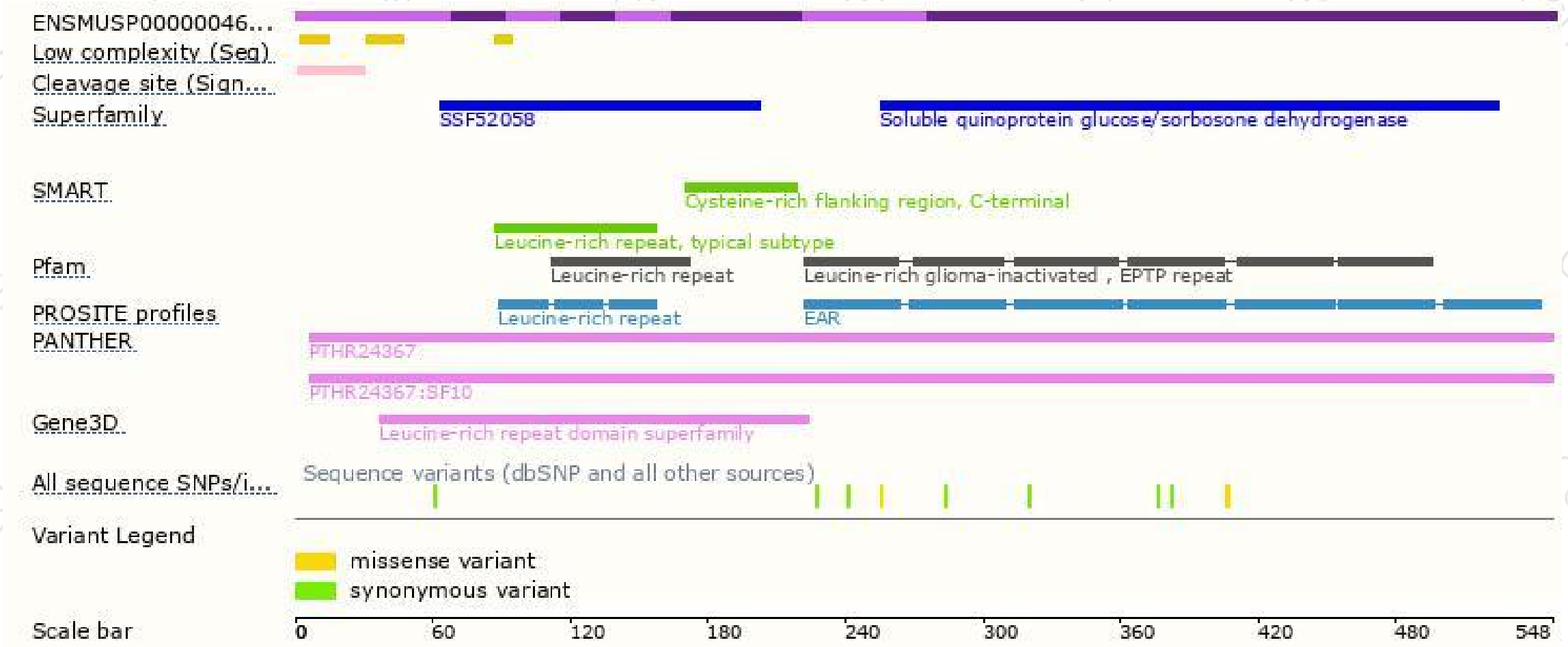
The strategy is based on the design of *Lgi3-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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