

Adgrf1 Cas9-KO Strategy

Designer:Fengjuan Wang
Reviewer:Fengjuan Wang
Design Date:2019-12-24

Project Overview

Project Name

Adgrf1

Project type

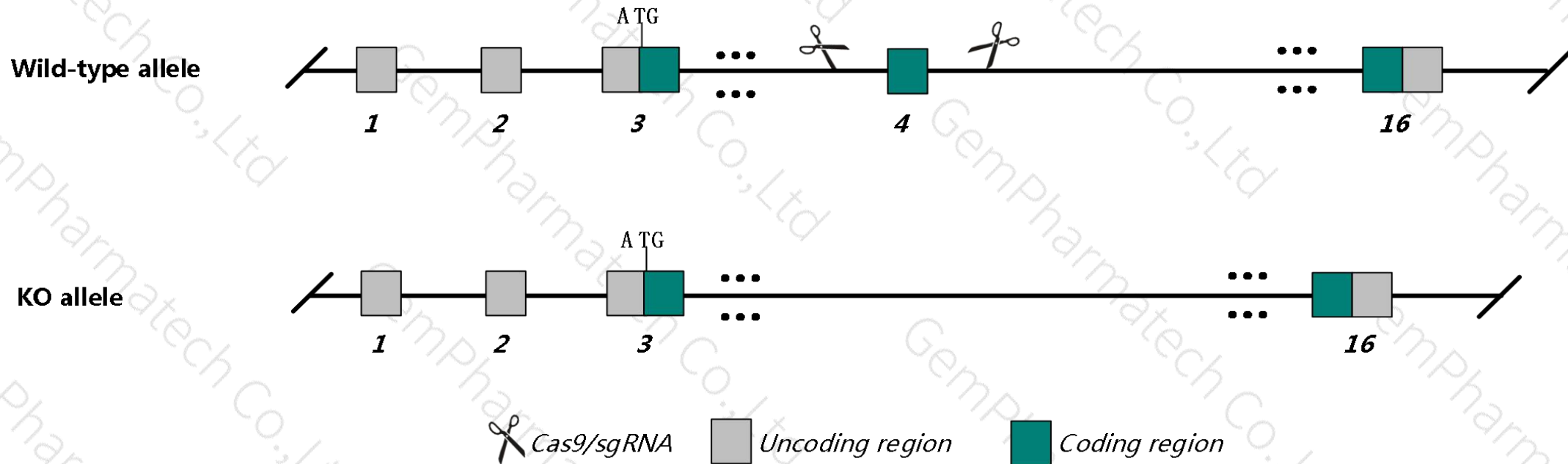
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Adgrf1* gene. The schematic diagram is as follows:



- The *Adgrf1* gene has 1 transcript. According to the structure of *Adgrf1* gene, exon4 of *Adgrf1-201* (ENSMUST00000047399.5) transcript is recommended as the knockout region. The region contains 61bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Adgrf1* gene. The brief process is as follows: CRISPR/Cas9 system

- According to the existing MGI data, Mice homozygous for a reporter allele exhibit normal viability and fertility.
- The *Adgrfl* 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)

Adgrf1 adhesion G protein-coupled receptor F1 [*Mus musculus* (house mouse)]

Gene ID: 77596, updated on 31-Jan-2019

Summary

Official Symbol Adgrf1 provided by [MGI](#)

Official Full Name adhesion G protein-coupled receptor F1 provided by [MGI](#)

Primary source [MGI:MGI:1924846](#)

See related [Ensembl:ENSMUSG000000041293](#)

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 Gpr110; KPG_009; 5031409J19Rik

Expression Biased expression in liver E18 (RPKM 3.1), liver adult (RPKM 1.6) and 4 other tissues [See more](#)

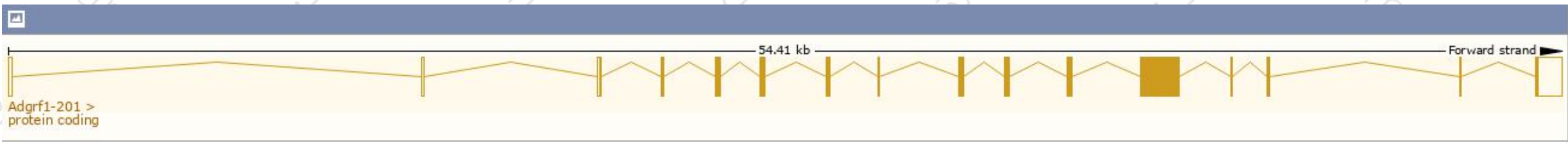
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

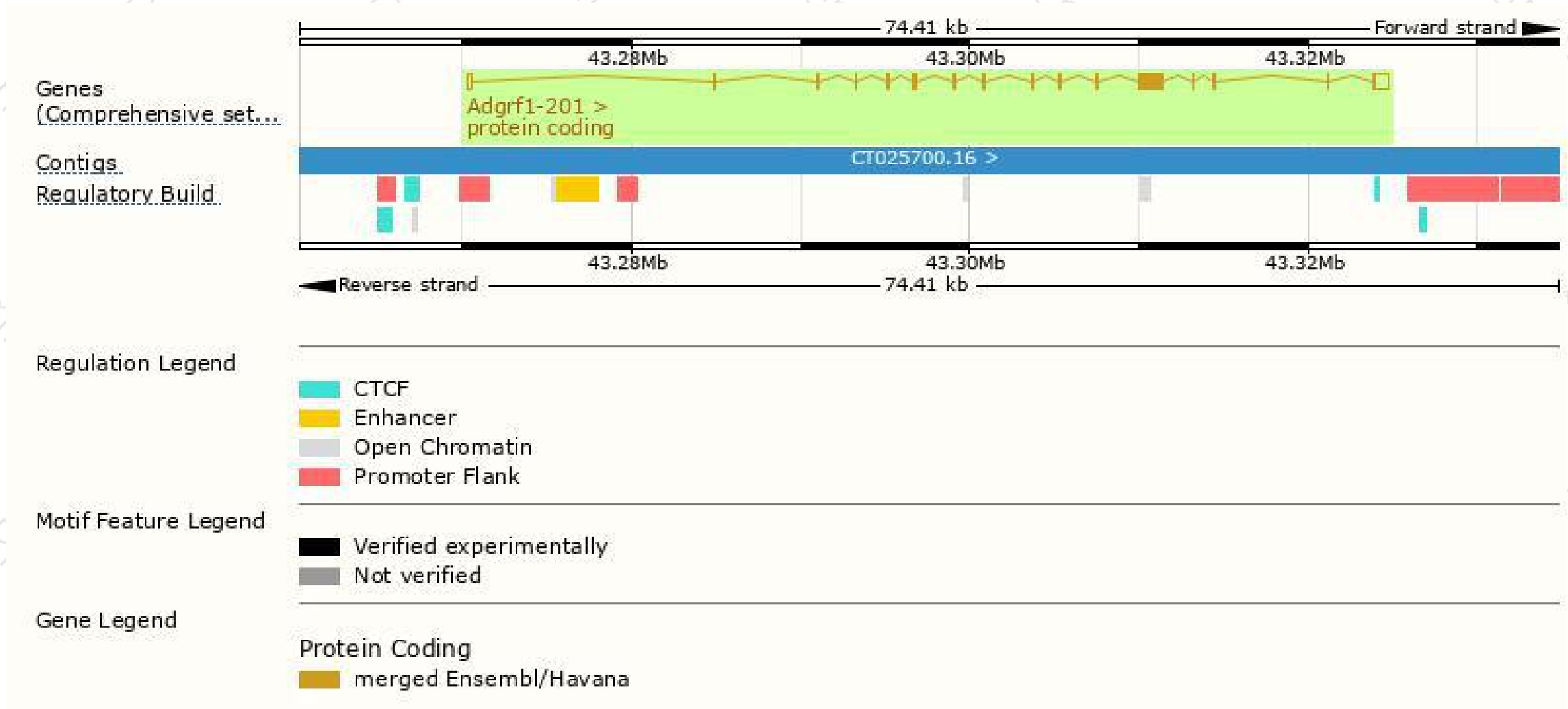
The gene has 1 transcript, and the transcript is shown below:

Show/hide columns (1 hidden)							Filter		
Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags		
Adgrf1-201	ENSMUST00000047399.5	3853	908aa	Protein coding	CCDS28795	Q8VEC3	TSL:1	GENCODE basic	APPRIS P1

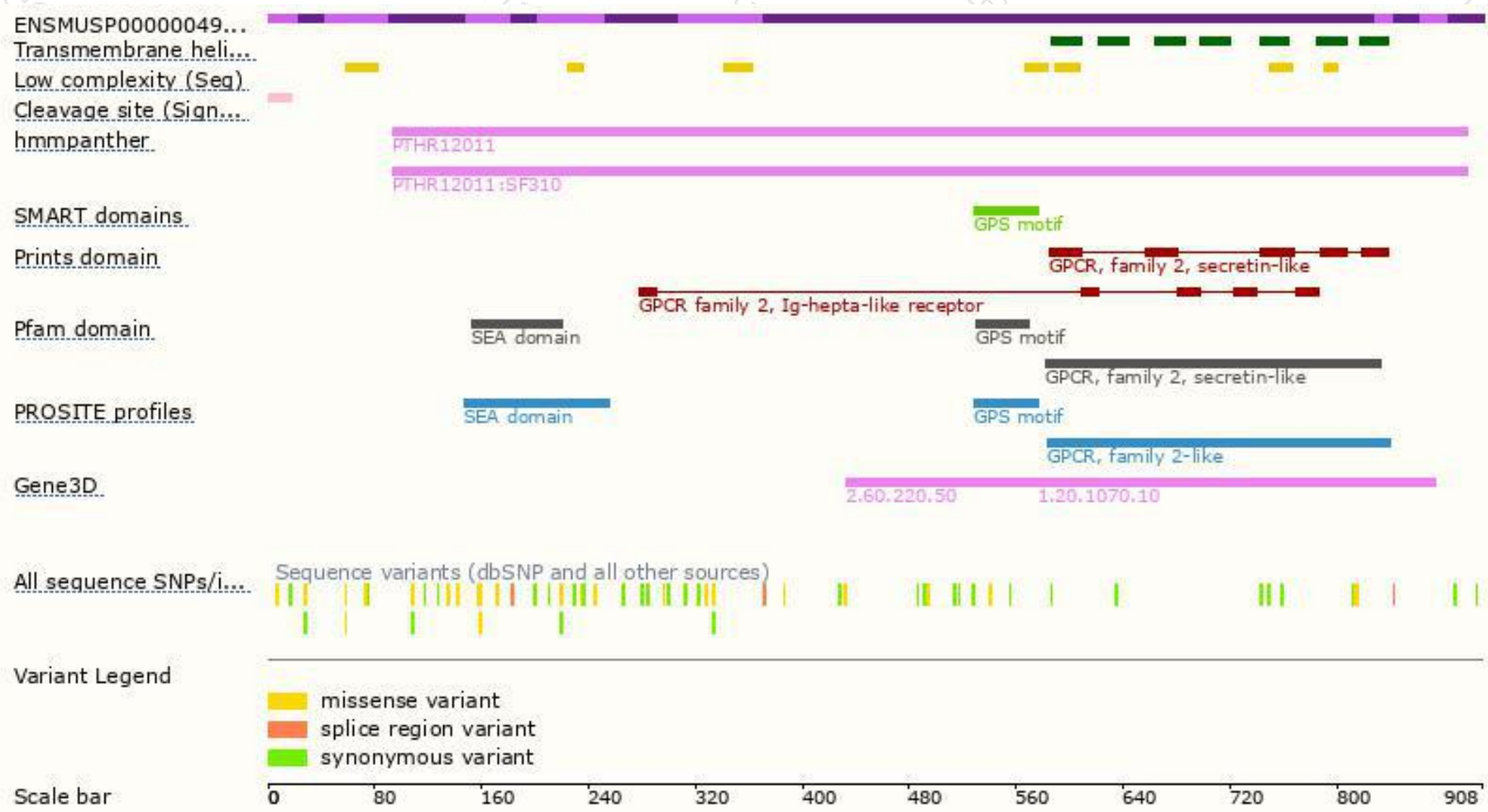
The strategy is based on the design of *Adgrf1-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

