

Fbxo27 Cas9-KO Strategy

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Project Overview

Project Name

Fbxo27

Project type

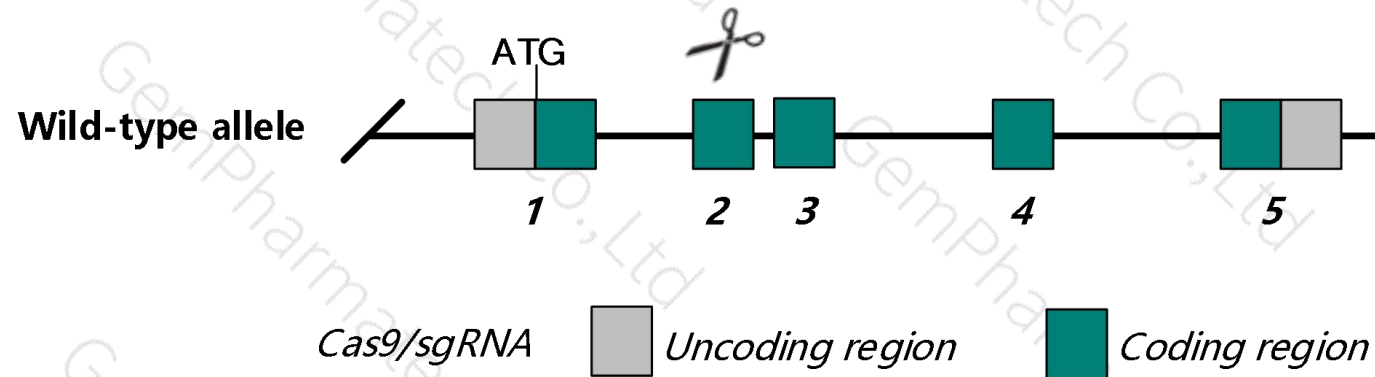
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Fbxo27* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Fbxo27* gene. The brief process is as follows: sgRNA was transcribed in vitro. Cas9 and sgRNA were microinjected into the fertilized eggs of C57BL/6N 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/6N mice.

- The *Fbxo27* gene is located on the Chr7. 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)

Fbxo27 F-box protein 27 [*Mus musculus* (house mouse)]

Gene ID: 233040, updated on 14-Aug-2019

Summary

Official Symbol Fbxo27 provided by [MGI](#)
Official Full Name F-box protein 27 provided by [MGI](#)
Primary source [MGI:MGI:2685007](#)
See related [Ensembl:ENSMUSG00000037463](#)
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 FBG5; Gm161; E130008B10Rik
Expression Broad expression in cerebellum adult (RPKM 9.8), placenta adult (RPKM 8.9) and 19 other tissues [See more](#)
Orthologs [human](#) [all](#)

Genomic context

Location: 7; 7 B1

See Fbxo27 in [Genome Data Viewer](#)

Exon count: 7

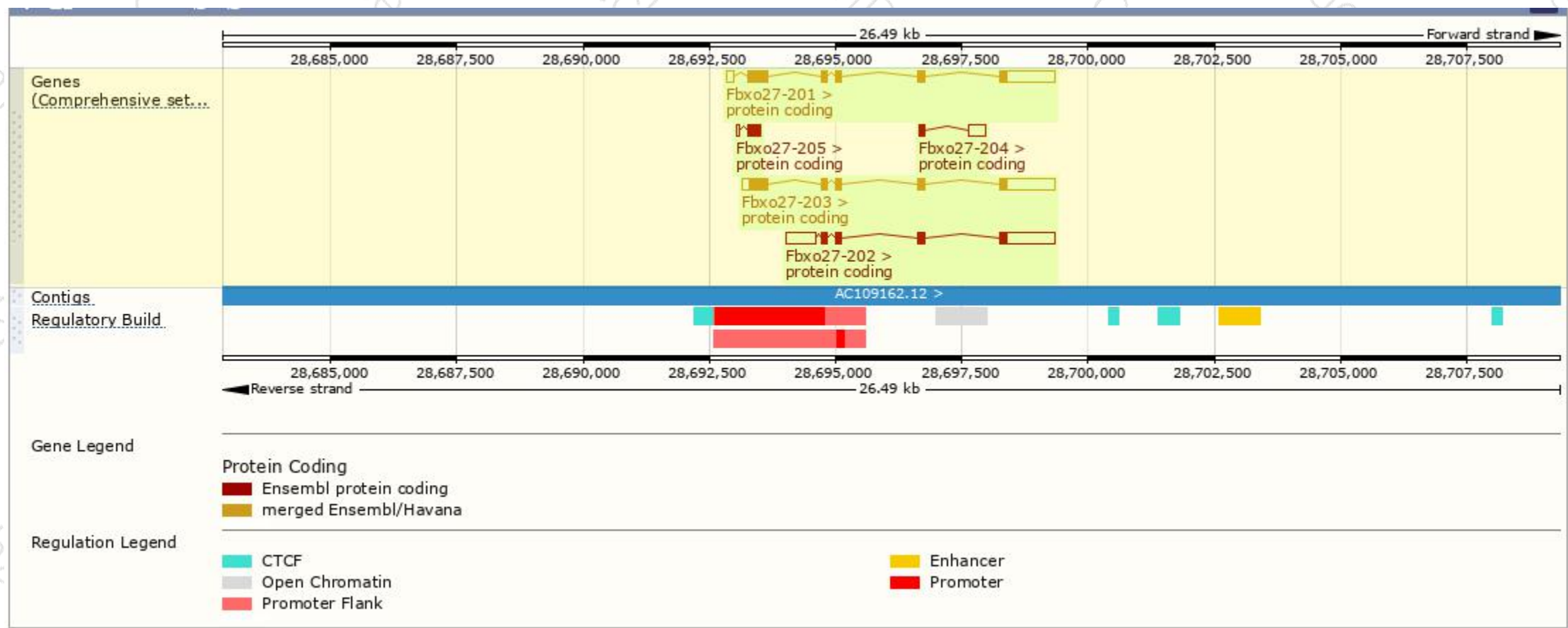
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	7	NC_000073.6 (28692780..28699338)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	7	NC_000073.5 (29477868..29484357)

Transcript information (Ensembl)

The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Fbxo27-203	ENSMUST00000108281.7	1948	280aa	Protein coding	CCDS52164	Q6DIA9	TSL:1 GENCODE basic APPRIS ALT2
Fbxo27-201	ENSMUST00000039998.10	1946	279aa	Protein coding	CCDS21051	Q6DIA9	TSL:1 GENCODE basic APPRIS P3
Fbxo27-202	ENSMUST00000108280.1	2031	156aa	Protein coding	-	Q3TEI7	TSL:1 GENCODE basic
Fbxo27-204	ENSMUST00000127368.1	458	46aa	Protein coding	-	A0A140LHU7	CDS 5' incomplete TSL:3
Fbxo27-205	ENSMUST00000151227.1	309	73aa	Protein coding	-	D3Z3I2	CDS 3' incomplete TSL:3

Genomic location distribution



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

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