

Fbxo28 Cas9-KO Strategy

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Project Overview

Project Name

Fbxo28

Project type

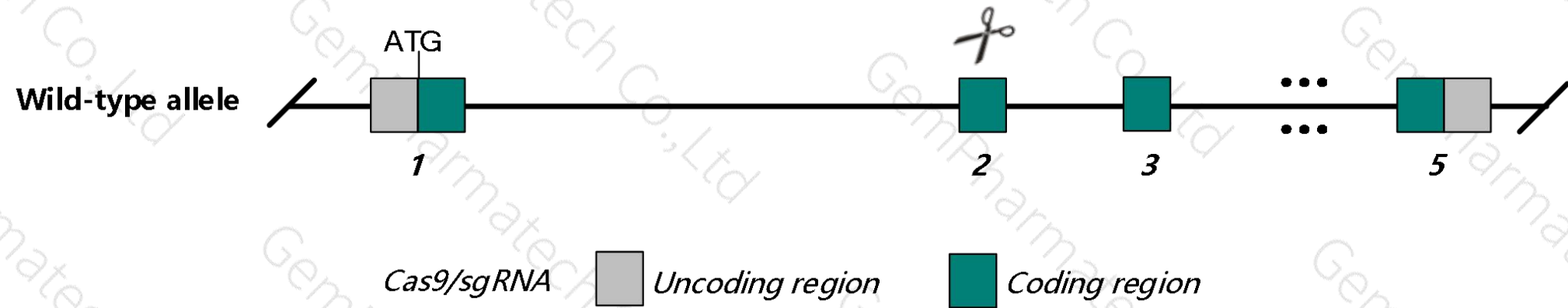
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Fbxo28* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Fbxo28* 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 *Fbxo28* 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)

Fbxo28 F-box protein 28 [*Mus musculus* (house mouse)]

Gene ID: 67948, updated on 12-Aug-2019

Summary

Official Symbol Fbxo28 provided by [MGI](#)
Official Full Name F-box protein 28 provided by [MGI](#)
Primary source [MGI:MGI:1261890](#)
See related [Ensembl:ENSMUSG00000047539](#)
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 Fbx28; mKIAA0483; D1Ert578e; 4833428J17Rik; 5730505P19Rik
Expression Ubiquitous expression in whole brain E14.5 (RPKM 7.0), CNS E14 (RPKM 6.8) and 28 other tissues [See more](#)
Orthologs [human](#) [all](#)

Genomic context

Location: 1 H5; 1 84.93 cM

See Fbxo28 in [Genome Data Viewer](#)

Exon count: 5

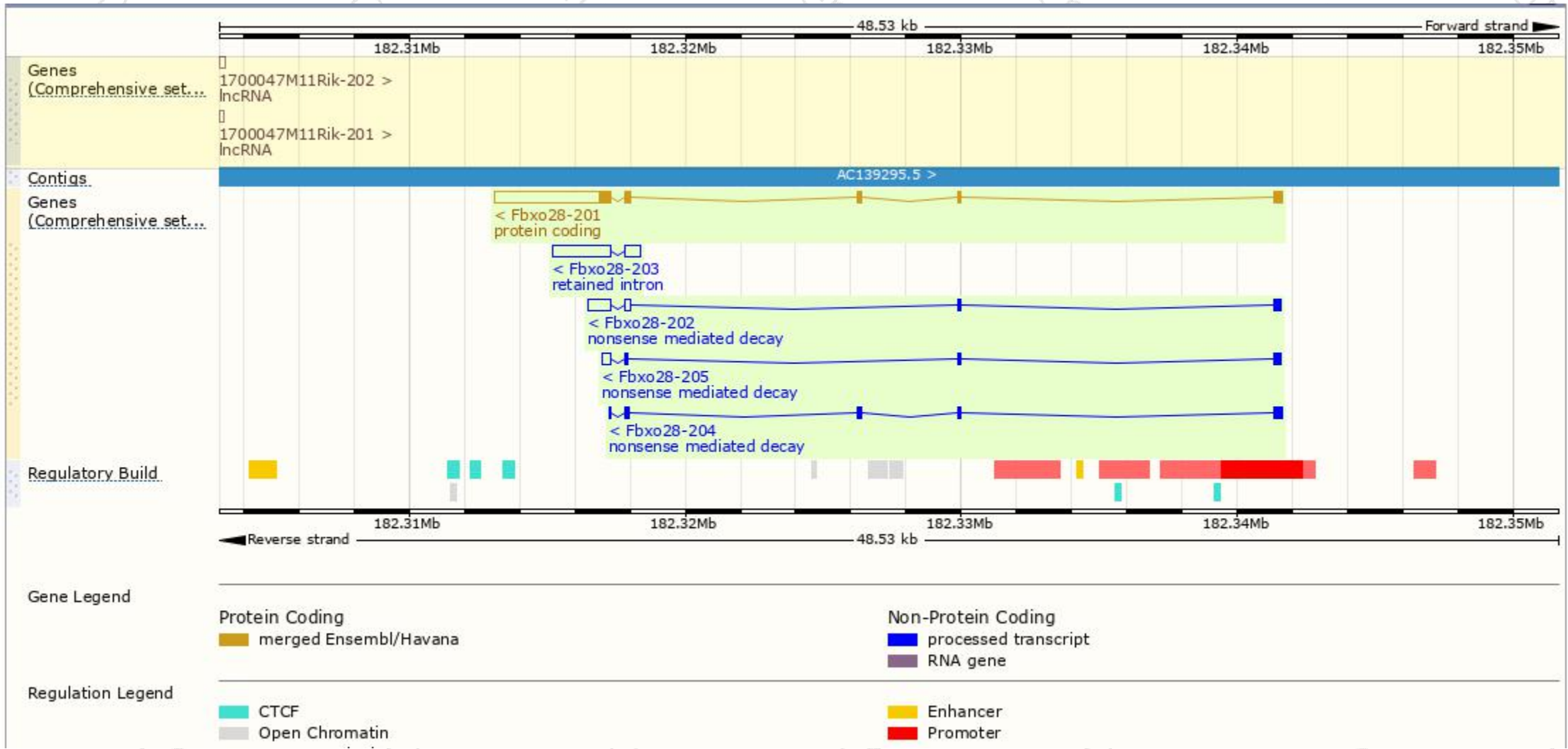
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	1	NC_000067.6 (182313102..182341606, complement)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	1	NC_000067.5 (184243233..184271737, complement)

Transcript information (Ensembl)

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

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Fbxo28-201	ENSMUST00000051431.9	4925	368aa	Protein coding	CCDS15588	Q8BIG4	TSL:1 GENCODE basic APPRIS P1
Fbxo28-202	ENSMUST00000192544.5	1407	126aa	Nonsense mediated decay	-	A0A0A6YX52	TSL:5
Fbxo28-205	ENSMUST00000195061.5	781	143aa	Nonsense mediated decay	-	A0A0A6YX00	CDS 5' incomplete TSL:3
Fbxo28-204	ENSMUST00000194213.1	747	195aa	Nonsense mediated decay	-	A0A0A6YVQ6	TSL:3
Fbxo28-203	ENSMUST00000193700.1	2676	No protein	Retained intron	-	-	TSL:1

Genomic location distribution



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

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