

***Fbxo25* Cas9-KO Strategy**

Designer: Yanhua Shen

Design Date: 2019-08-07

Project Overview

Project Name

Fbxo25

Project type

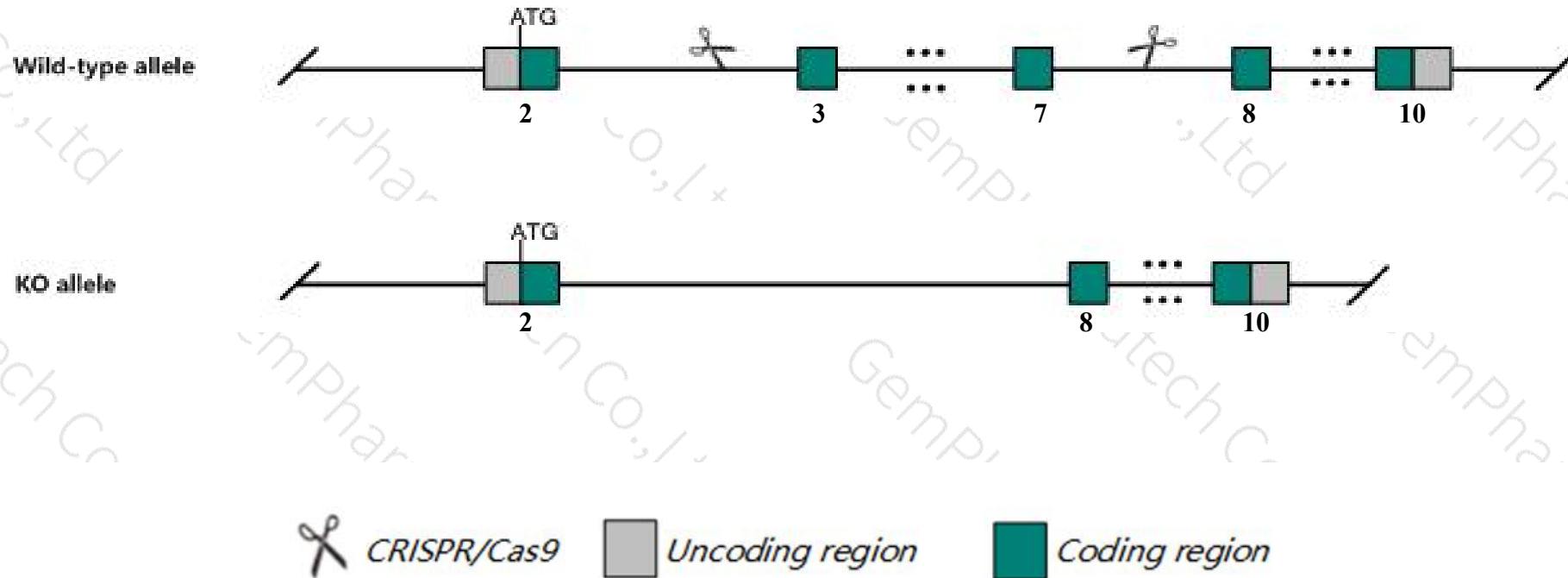
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Fbxo25* gene. The schematic diagram is as follows:



- The *Fbxo25* gene has 5 transcripts. According to the structure of *Fbxo25* gene, exon3-exon7 of *Fbxo25-201* (ENSMUST00000043520.4) transcript is recommended as the knockout region. The region contains 523bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Fbxo25* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Fbxo25* 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.

Gene information (NCBI)

Fbxo25 F-box protein 25 [Mus musculus (house mouse)]

Gene ID: 66822, updated on 31-Jan-2019

Summary



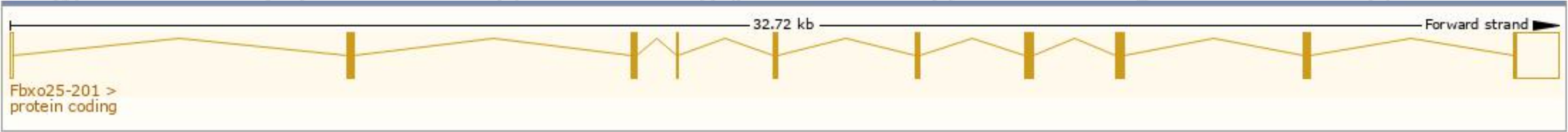
Official Symbol	Fbxo25 provided by MGI
Official Full Name	F-box protein 25 provided by MGI
Primary source	MGI:MGI:1914072
See related	Ensembl:ENSMUSG00000038365
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	9130015I06Rik, A1649137, Fbx25
Expression	Ubiquitous expression in duodenum adult (RPKM 42.5), colon adult (RPKM 41.2) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

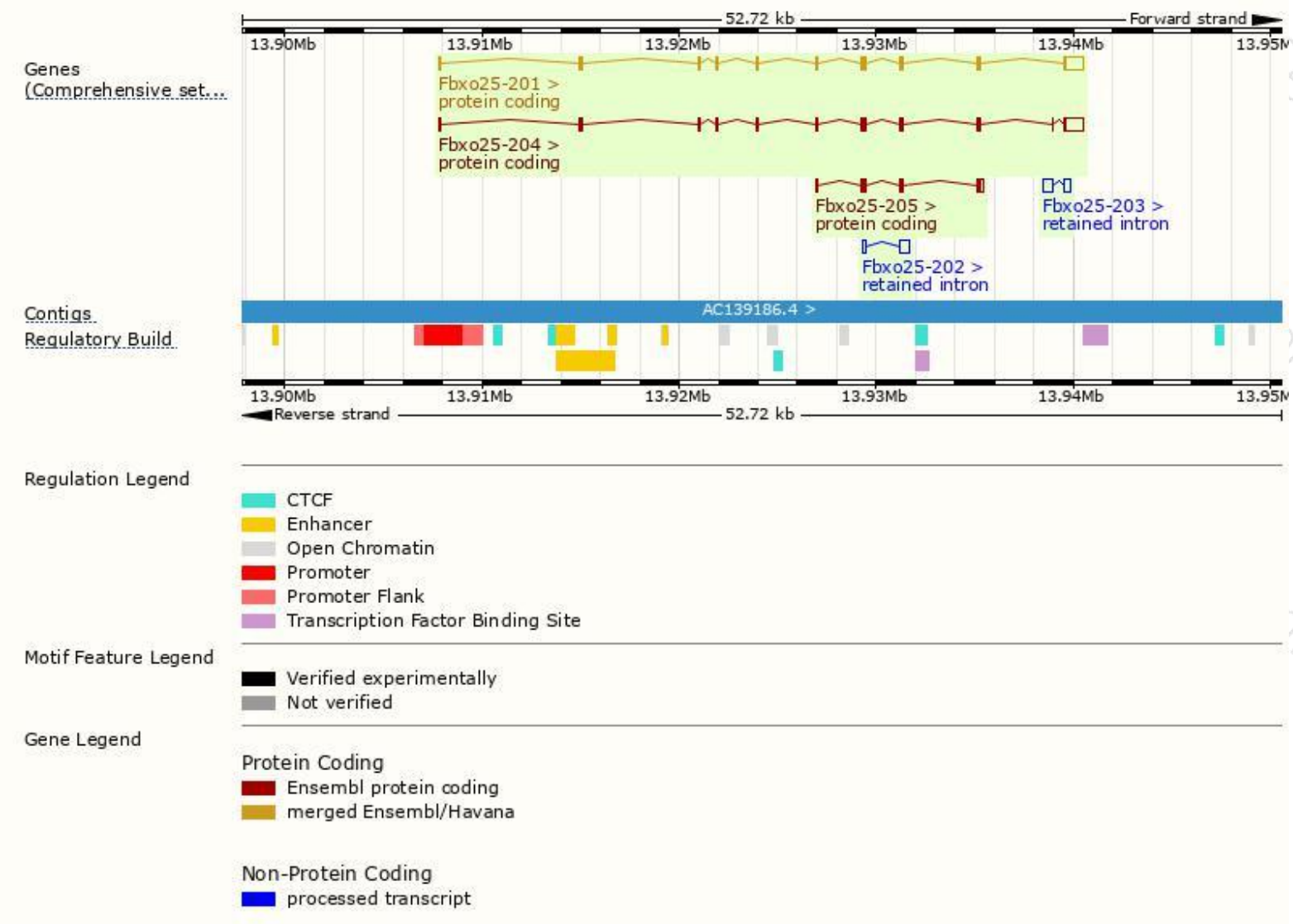
The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Fbxo25-204	ENSMUST00000209913.1	2035	365aa	Protein coding	CCDS85507	A0A1B0GRC8	TSL:1 GENCODE basic APPRIS ALT2
Fbxo25-201	ENSMUST00000043520.4	2012	357aa	Protein coding	CCDS22118	Q9D2Y6	TSL:1 GENCODE basic APPRIS P3
Fbxo25-205	ENSMUST00000210280.1	737	201aa	Protein coding	-	A0A1B0GSB9	CDS 5' incomplete TSL:3
Fbxo25-203	ENSMUST00000209310.1	781	No protein	Retained intron	-	-	TSL:2
Fbxo25-202	ENSMUST00000209290.1	646	No protein	Retained intron	-	-	TSL:3

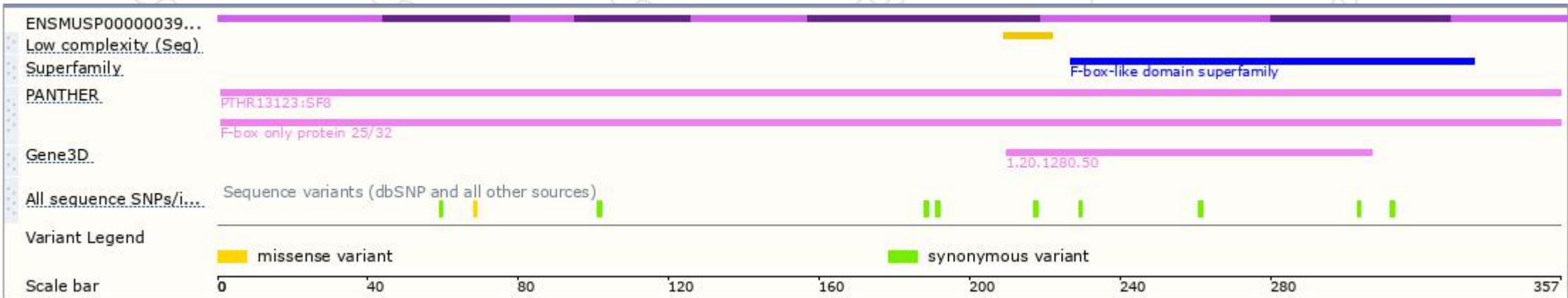
The strategy is based on the design of *Fbxo25-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

Tel: 400-9660890

