

Fry Cas9-KO Strategy

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Project Overview

Project Name

Fry

Project type

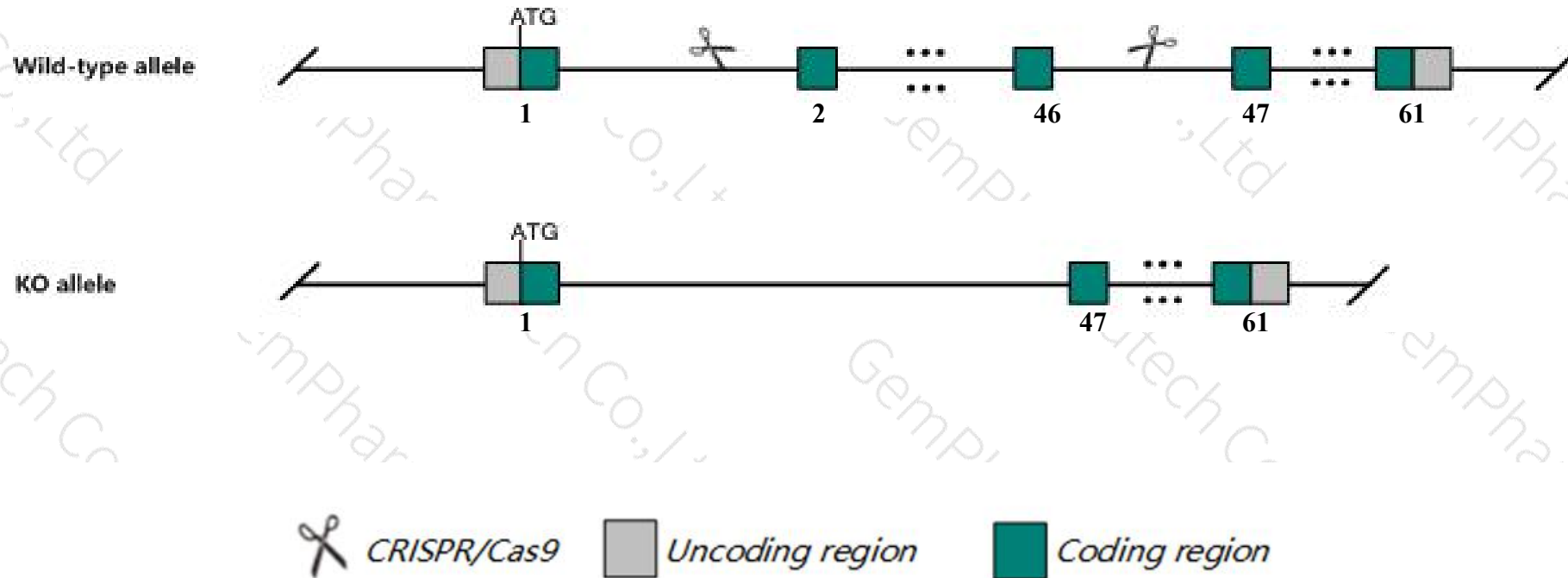
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

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



- The *Fry* gene has 17 transcripts. According to the structure of *Fry* gene, exon2-exon46 of *Fry-201* (ENSMUST00000087204.8) transcript is recommended as the knockout region. The region contains 6641bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Fry* gene. The brief process is as follows: CRISPR/Cas9 system w

- The *Fry* gene is located on the Chr5. 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)

Fry FRY microtubule binding protein [Mus musculus (house mouse)]

Gene ID: 320365, updated on 31-Jan-2019

Summary



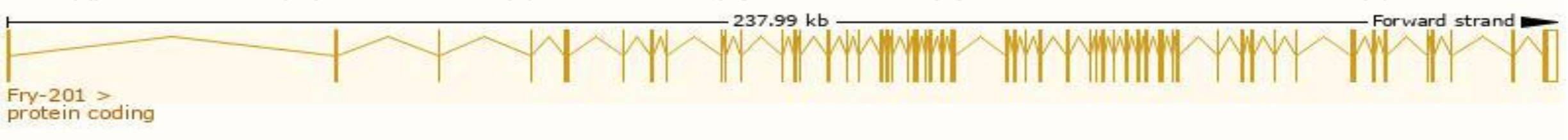
Official Symbol	Fry provided by MGI
Official Full Name	FRY microtubule binding protein provided by MGI
Primary source	MGI:MGI:2443895
See related	Ensembl:ENSMUSG00000056602
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	13CDNA73, 9330186A19Rik, AF346502, AI462658, C87180, D930046M03, cg003, mKIAA4143
Expression	Broad expression in cerebellum adult (RPKM 11.0), subcutaneous fat pad adult (RPKM 10.8) and 24 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

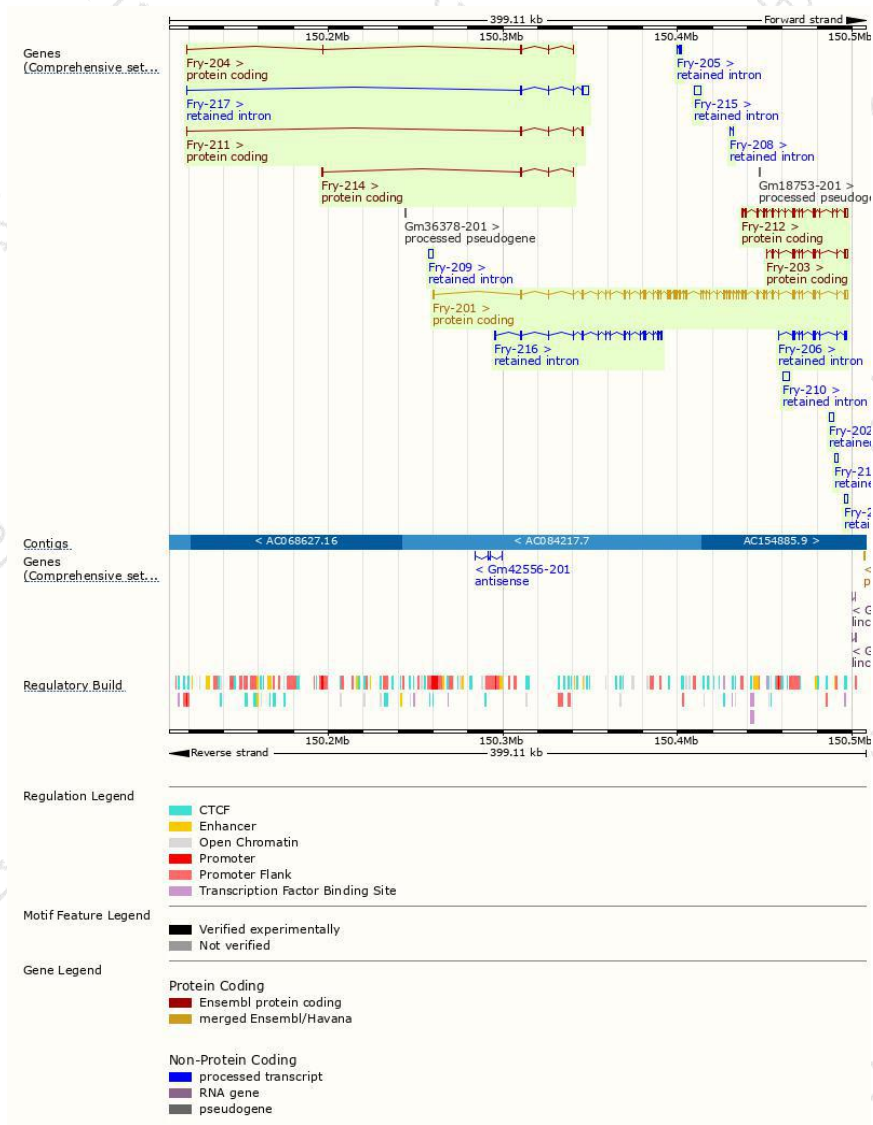
The gene has 17 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Fry-201	ENSMUST00000087204.8	10893	3020aa	Protein coding	CCDS51708	E9Q8I9	TSL:5 GENCODE basic APPRIS P1
Fry-212	ENSMUST00000202566.3	4379	1016aa	Protein coding	-	A0A0J9YVH0	CDS 5' incomplete TSL:5
Fry-203	ENSMUST00000200863.1	3288	653aa	Protein coding	-	A0A0J9YTT8	CDS 5' incomplete TSL:1
Fry-211	ENSMUST00000202530.3	704	159aa	Protein coding	-	A0A0J9YUP4	CDS 3' incomplete TSL:3
Fry-204	ENSMUST00000200960.3	687	89aa	Protein coding	-	A0A0J9YVI5	CDS 3' incomplete TSL:3
Fry-214	ENSMUST00000202600.3	592	175aa	Protein coding	-	A0A0J9YUS4	CDS 3' incomplete TSL:3
Fry-215	ENSMUST00000202630.1	3980	No protein	Retained intron	-	-	TSL:NA
Fry-210	ENSMUST00000202070.1	3684	No protein	Retained intron	-	-	TSL:NA
Fry-217	ENSMUST00000203000.3	3670	No protein	Retained intron	-	-	TSL:1
Fry-216	ENSMUST00000202841.1	2784	No protein	Retained intron	-	-	TSL:1
Fry-202	ENSMUST00000200750.1	2618	No protein	Retained intron	-	-	TSL:NA
Fry-209	ENSMUST00000201854.1	2364	No protein	Retained intron	-	-	TSL:NA
Fry-206	ENSMUST00000201196.1	2204	No protein	Retained intron	-	-	TSL:1
Fry-213	ENSMUST00000202571.1	1878	No protein	Retained intron	-	-	TSL:NA
Fry-207	ENSMUST00000201628.1	1761	No protein	Retained intron	-	-	TSL:NA
Fry-205	ENSMUST00000200964.1	937	No protein	Retained intron	-	-	TSL:3
Fry-208	ENSMUST00000201634.1	398	No protein	Retained intron	-	-	TSL:3

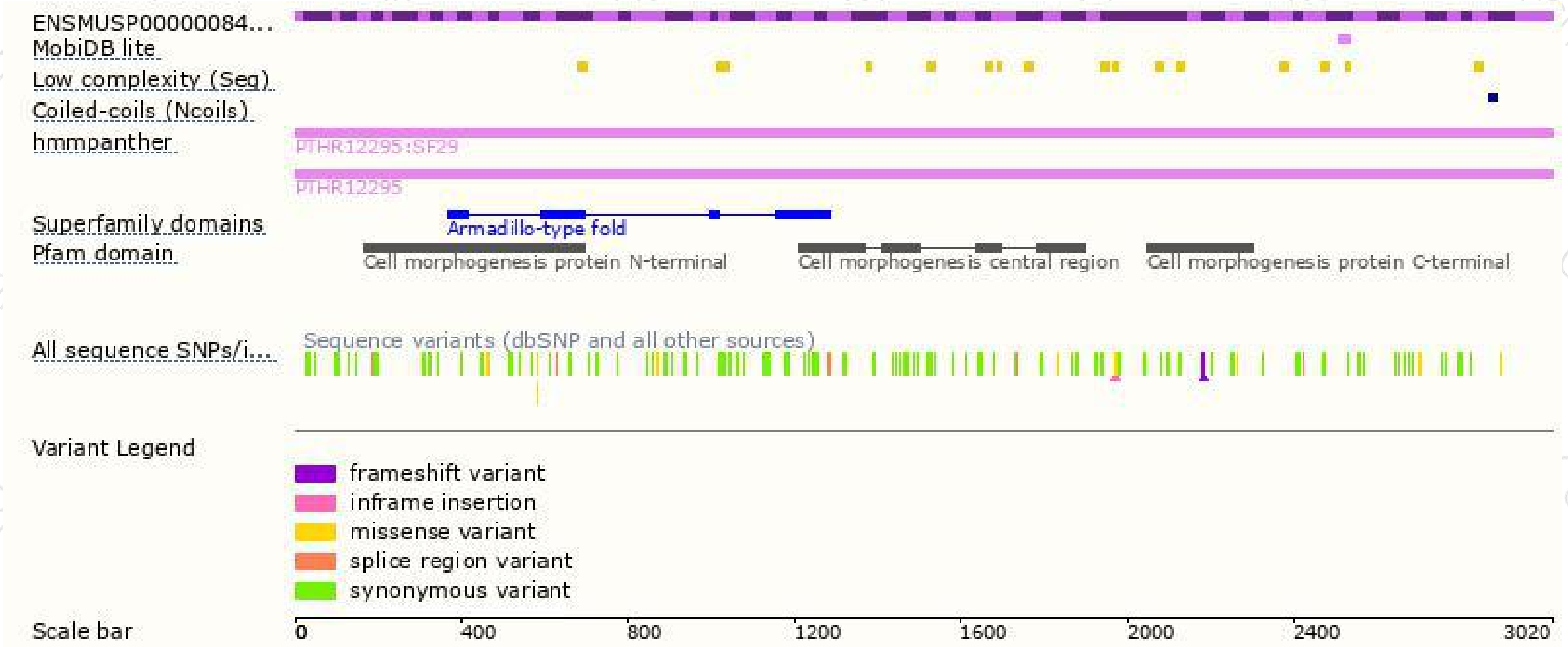
The strategy is based on the design of *Fry-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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