

Fnbp1l Cas9-KO Strategy

Designer: Shilei Zhu

Project Overview

Project Name

Fnbp1l

Project type

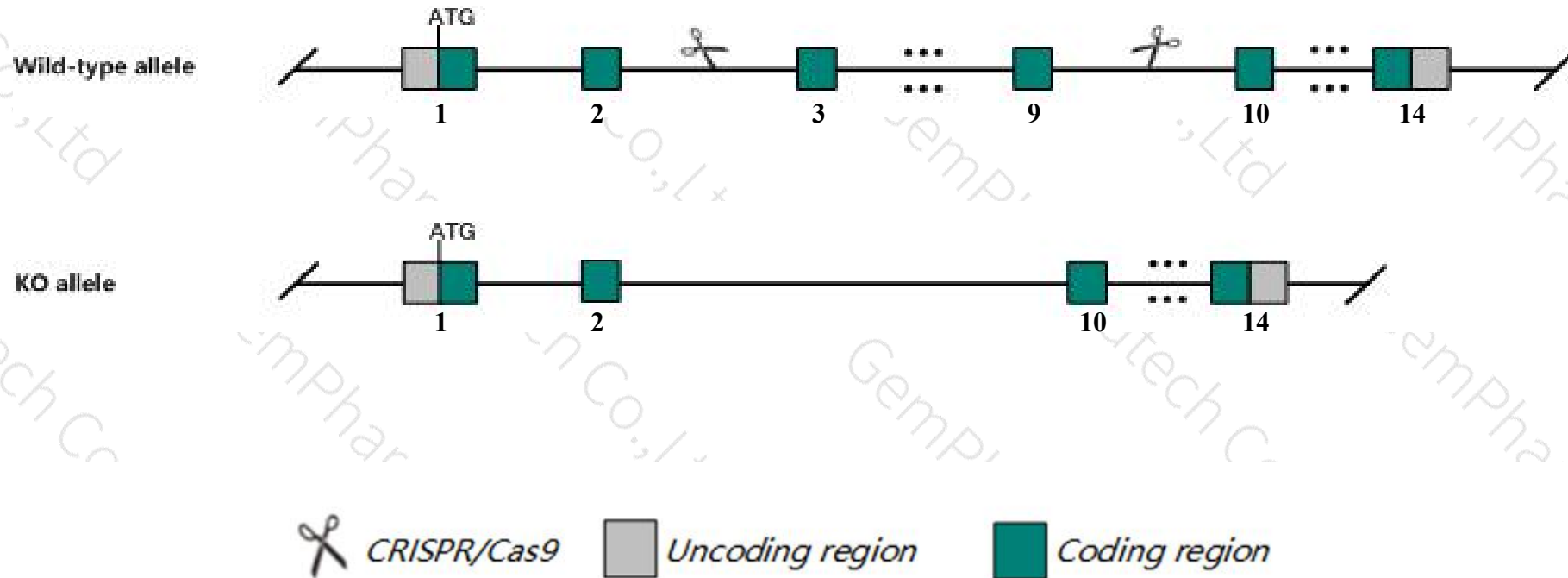
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Fnbp1l* gene. The schematic diagram is as follows:



- The *Fnbp11* gene has 5 transcripts. According to the structure of *Fnbp11* gene, exon3-exon9 of *Fnbp11-201* (ENSMUST00000162409.7) transcript is recommended as the knockout region. The region contains 850bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Fnbp11* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Fnbp11* gene is located on the Chr3. 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)

Fnbp1l formin binding protein 1-like [Mus musculus (house mouse)]

Gene ID: 214459, updated on 31-Jan-2019

Summary



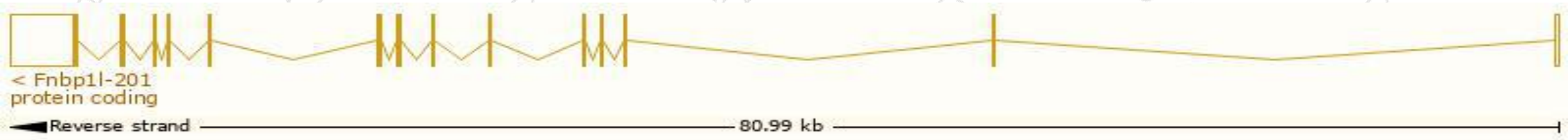
Official Symbol	Fnbp1l provided by MGI
Official Full Name	formin binding protein 1-like provided by MGI
Primary source	MGI:MGI:1925642
See related	Ensembl:ENSMUSG00000039735
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2610318I01Rik, AW548221, TOCA1, toca-1
Expression	Biased expression in CNS E18 (RPKM 92.2), CNS E14 (RPKM 86.3) and 10 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

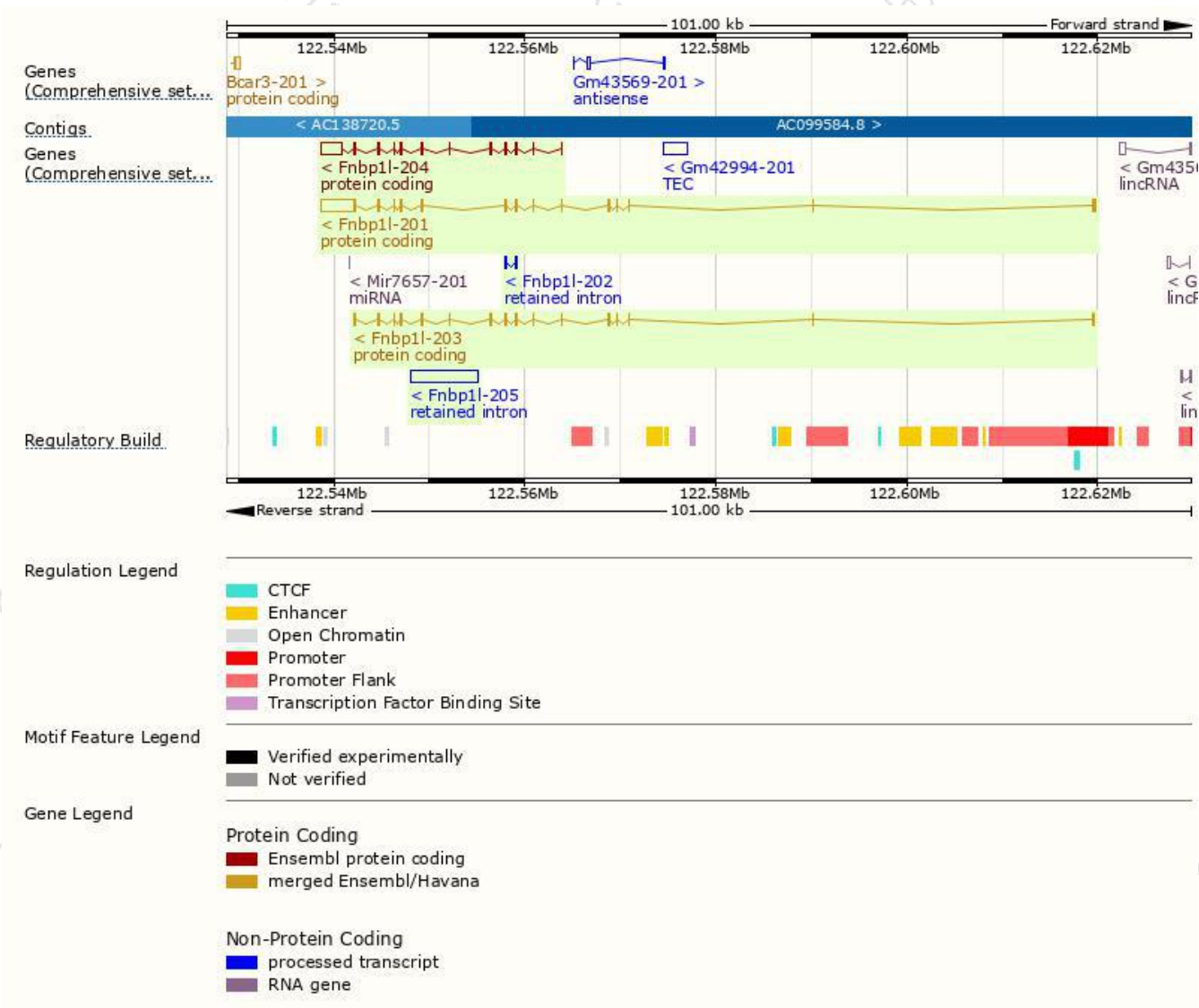
The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Fnbp1l-201	ENSMUST00000162409.7	5198	551aa	Protein coding	CCDS17811	E9PUK3	TSL:5 GENCODE basic APPRIS P3
Fnbp1l-203	ENSMUST00000162947.1	1830	609aa	Protein coding	CCDS51062	E9PUI5	TSL:5 GENCODE basic APPRIS ALT 1
Fnbp1l-204	ENSMUST00000197259.4	3553	451aa	Protein coding	-	A0A0G2JFM9	CDS 5' incomplete TSL:5
Fnbp1l-205	ENSMUST00000197342.1	7045	No protein	Retained intron	-	-	TSL:NA
Fnbp1l-202	ENSMUST00000162884.2	423	No protein	Retained intron	-	-	TSL:5

The strategy is based on the design of *Fnbp1l-201* transcript,The transcription is shown below



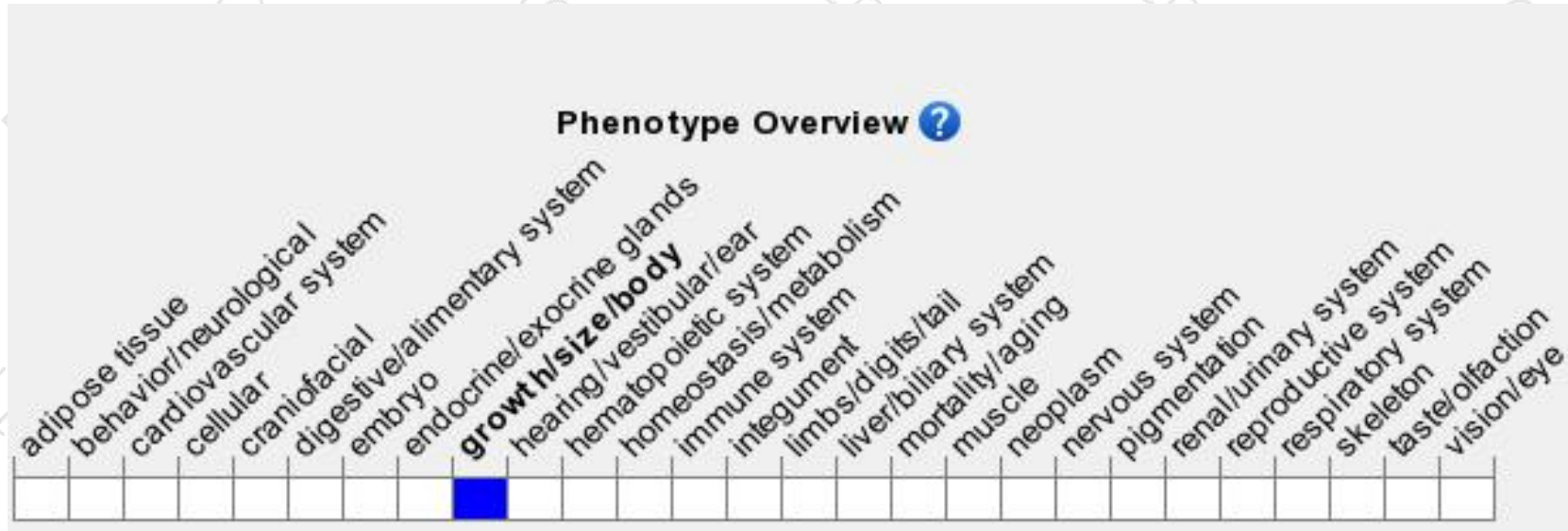
Genomic location distribution



Protein domain



Mouse phenotype description(MGI)



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

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

Tel: 400-9660890

