

***Usp32* Cas9-KO Strategy**

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Project Overview

Project Name

Usp32

Project type

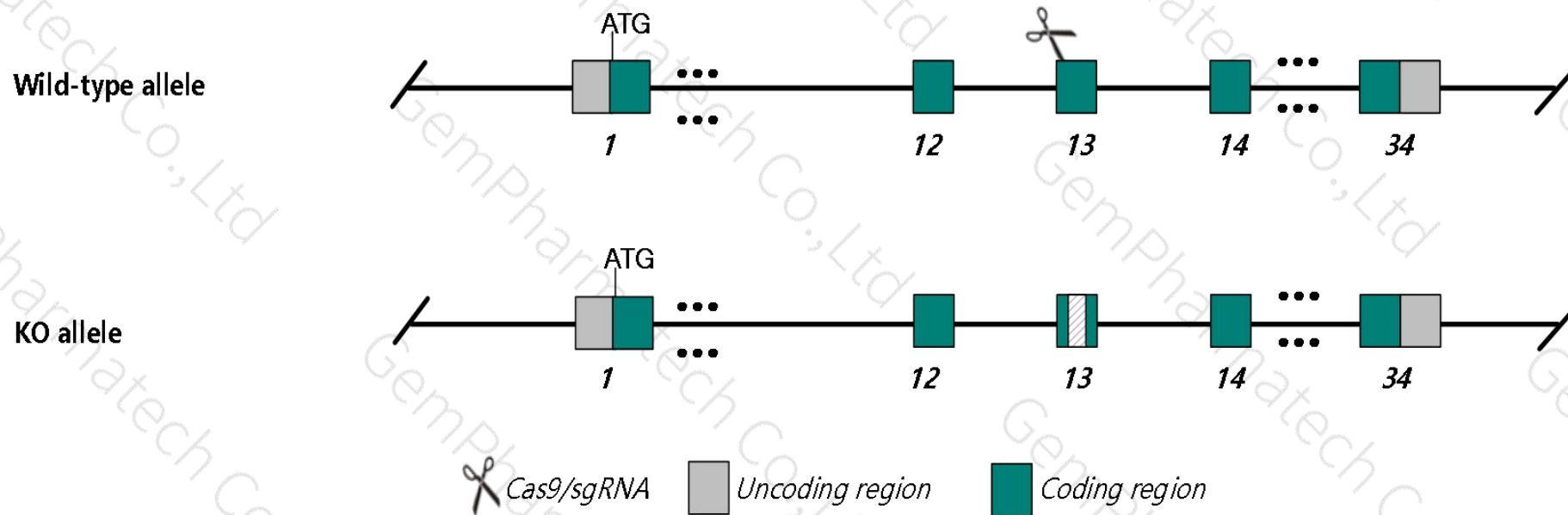
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Usp32* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Usp32* 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 *Usp32* gene is located on the Chr11. 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)

Usp32 ubiquitin specific peptidase 32 [*Mus musculus* (house mouse)]

Gene ID: 237898, updated on 12-Aug-2019

Summary

Official Symbol	Usp32 provided by MGI
Official Full Name	ubiquitin specific peptidase 32 provided by MGI
Primary source	MGI:MGI:2144475
See related	Ensembl:ENSMUSG00000000804
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	AW045245; 2900074J03Rik; 6430526O11Rik
Expression	Broad expression in liver E14 (RPKM 14.5), liver E14.5 (RPKM 12.8) and 24 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

The gene has 9 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Usp32-202	ENSMUST00000108075.8	7053	1604aa	Protein coding	CCDS36264	F8VPZ3	TSL:2 GENCODE basic APPRIS P1
Usp32-208	ENSMUST00000174602.1	772	257aa	Protein coding	-	G3UZF4	CDS 5' and 3' incomplete TSL:3
Usp32-206	ENSMUST00000173156.1	664	174aa	Protein coding	-	G3UX31	CDS 5' incomplete TSL:3
Usp32-201	ENSMUST00000000821.14	3362	287aa	Nonsense mediated decay	-	F6XDW8	CDS 5' incomplete TSL:5
Usp32-203	ENSMUST00000172515.1	486	87aa	Nonsense mediated decay	-	G3UXQ4	CDS 5' incomplete TSL:5
Usp32-209	ENSMUST00000174809.1	566	No protein	Retained intron	-	-	TSL:2
Usp32-205	ENSMUST00000172950.1	361	No protein	Retained intron	-	-	TSL:5
Usp32-204	ENSMUST00000172595.1	457	No protein	lncRNA	-	-	TSL:2
Usp32-207	ENSMUST00000173271.7	372	No protein	lncRNA	-	-	TSL:3

Genomic location distribution



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

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