

# *Usp11* Cas9-KO Strategy

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# Project Overview

**Project Name**

*Usp11*

**Project type**

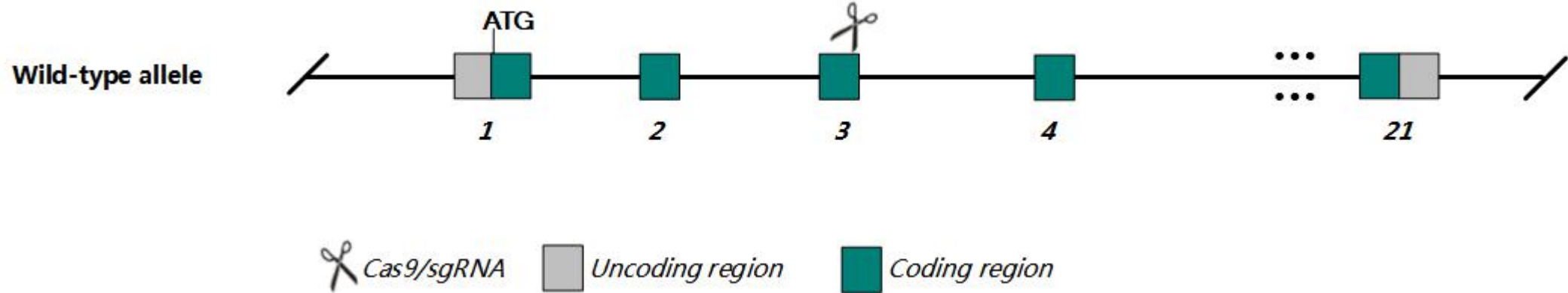
**Cas9-KO**

**Strain background**

**C57BL/6N**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Usp11* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Usp11* 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 *Usp11* gene is located on the ChrX. 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)

## Usp11 ubiquitin specific peptidase 11 [ *Mus musculus* (house mouse) ]

Gene ID: 236733, updated on 12-Aug-2019

### Summary

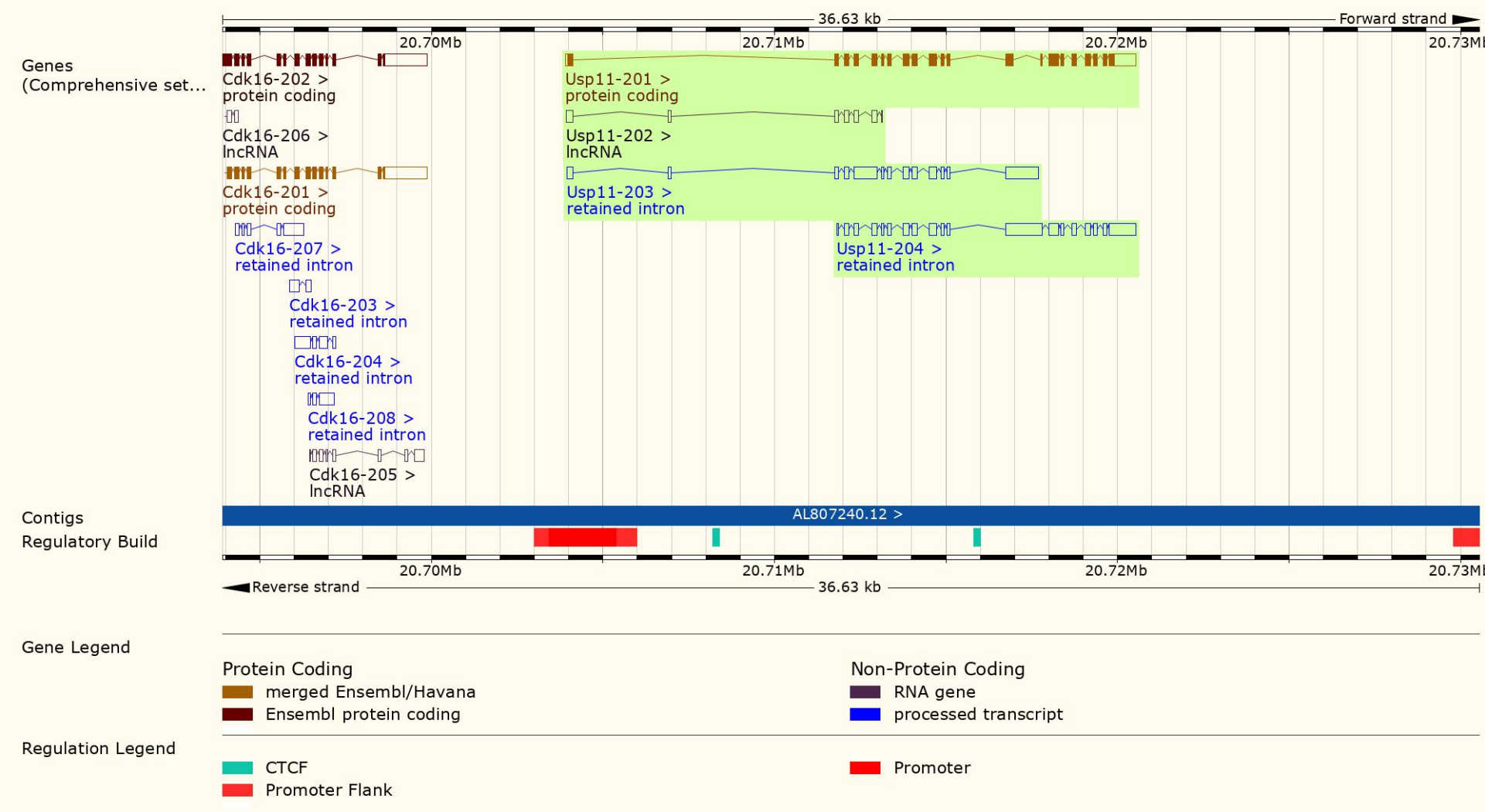
Official Symbol	Usp11 provided by <a href="#">MGI</a>
Official Full Name	ubiquitin specific peptidase 11 provided by <a href="#">MGI</a>
Primary source	<a href="#">MGI:MGI:2384312</a>
See related	<a href="#">Ensembl:ENSMUSG00000031066</a>
Gene type	protein coding
RefSeq status	VALIDATED
Organism	<a href="#">Mus musculus</a>
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	mKIAA4085; 6230415D12Rik
Expression	Broad expression in CNS E14 (RPKM 22.1), whole brain E14.5 (RPKM 21.8) and 23 other tissues <a href="#">See more</a>
Orthologs	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

The gene has 4 transcripts,all transcripts are shown below:

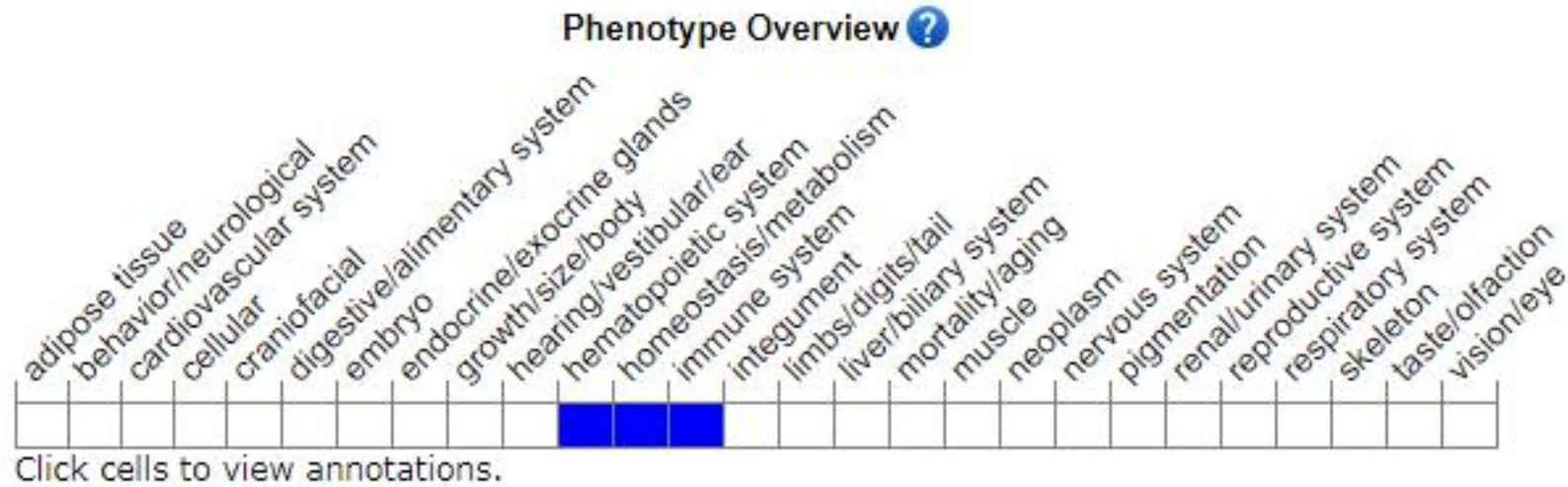
Name ▲	Transcript ID ▲	bp ▲	Protein ▲	Biotype ▲	CCDS ▲	UniProt ▲	Flags ▲
Usp11-201	<a href="#">ENSMUST00000033383.2</a>	3467	<a href="#">921aa</a>	Protein coding	<a href="#">CCDS53015</a>	<a href="#">Q99K46</a>	TSL:2 GENCODE basic APPRIS P1
Usp11-202	<a href="#">ENSMUST00000127294.7</a>	801	No protein	lncRNA	-	-	TSL:3
Usp11-203	<a href="#">ENSMUST00000137101.7</a>	2967	No protein	Retained intron	-	-	TSL:2
Usp11-204	<a href="#">ENSMUST00000149960.1</a>	3976	No protein	Retained intron	-	-	TSL:1

# Genomic location distribution





# 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.

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