

# *Angel2* Cas9-KO Strategy

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# Project Overview

**Project Name**

*Angel2*

**Project type**

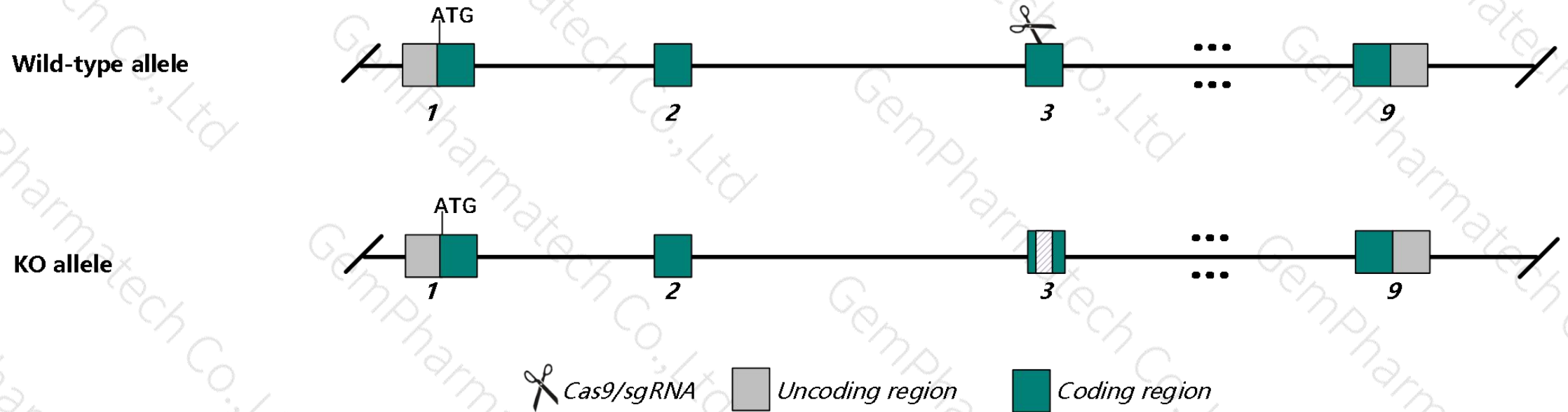
**Cas9-KO**

**Strain background**

**C57BL/6N**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Angel2* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Angel2* 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 *Angel2* gene is located on the Chr1. 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)

## Angel2 angel homolog 2 [ *Mus musculus* (house mouse) ]

Gene ID: 52477, updated on 14-Aug-2019

### Summary

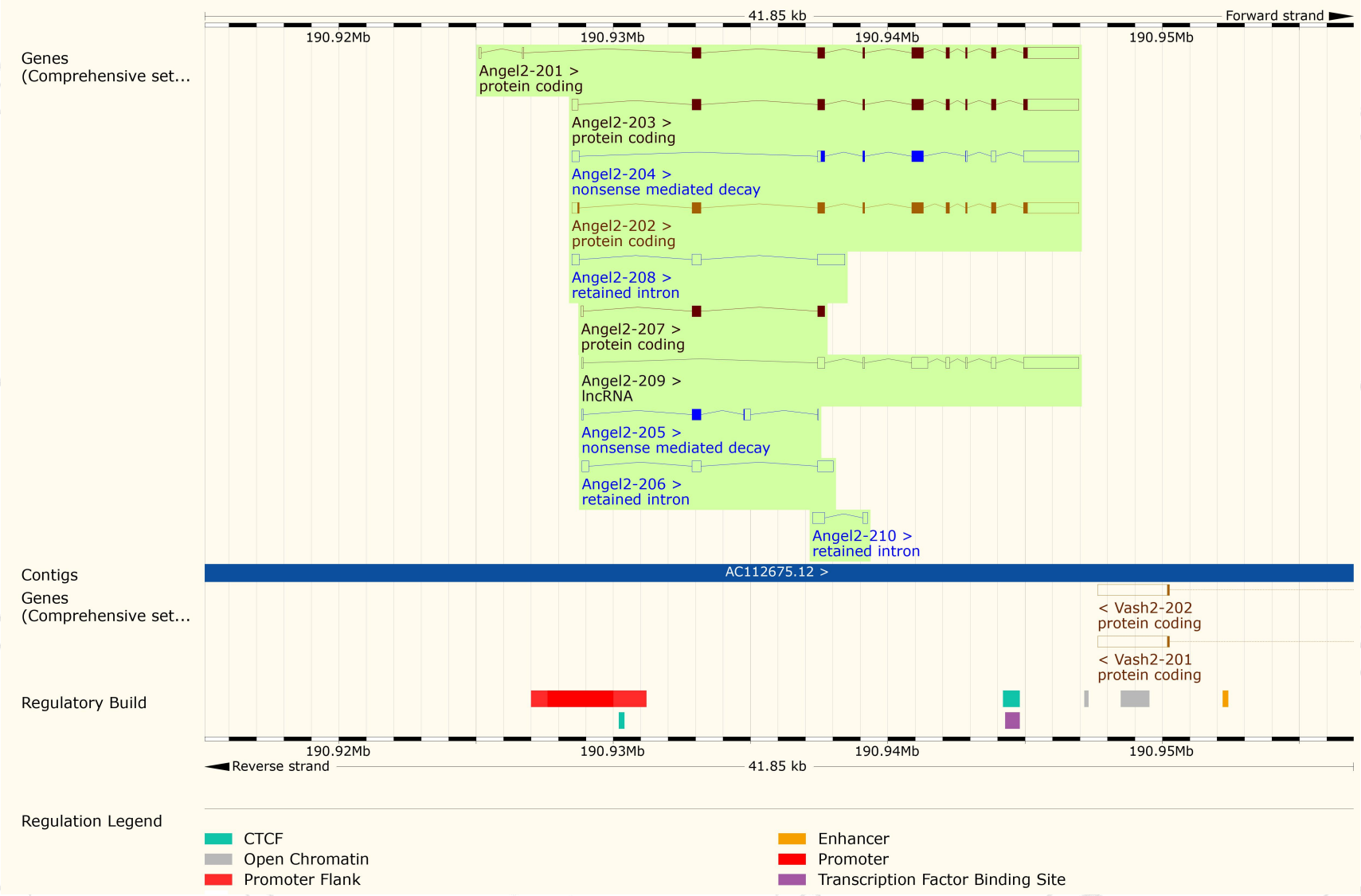
Official Symbol	Angel2 provided by MGI
Official Full Name	angel homolog 2 provided by MGI
Primary source	MGI:MGI:1196310
See related	Ensembl:ENSMUSG00000026634
Gene type	protein coding
RefSeq status	VALIDATED
Organism	<i>Mus musculus</i>
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	AI845692; D1Ert396e; D1Ert654e; 2610307I21Rik; 5730410O10Rik
Expression	Ubiquitous expression in CNS E14 (RPKM 13.5), CNS E18 (RPKM 13.0) and 28 other tissues <a href="#">See more</a>
Orthologs	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

The gene has 10 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Angel2-202	<a href="#">ENSMUST00000066632.13</a>	3714	<a href="#">544aa</a>	Protein coding	<a href="#">CCDS15612</a>	<a href="#">Q8K1C0</a>	TSL:1 GENCODE basic APPRIS P3
Angel2-203	<a href="#">ENSMUST00000110899.6</a>	3673	<a href="#">522aa</a>	Protein coding	<a href="#">CCDS56667</a>	<a href="#">Q8K1C0</a>	TSL:5 GENCODE basic APPRIS ALT1
Angel2-201	<a href="#">ENSMUST00000027947.12</a>	3562	<a href="#">522aa</a>	Protein coding	<a href="#">CCDS56667</a>	<a href="#">Q8K1C0</a>	TSL:1 GENCODE basic APPRIS ALT1
Angel2-207	<a href="#">ENSMUST00000135364.6</a>	668	<a href="#">192aa</a>	Protein coding	-	<a href="#">F6SBQ6</a>	CDS 3' incomplete TSL:2
Angel2-204	<a href="#">ENSMUST00000123384.7</a>	3261	<a href="#">212aa</a>	Nonsense mediated decay	-	<a href="#">Q8K1C0</a>	TSL:1
Angel2-205	<a href="#">ENSMUST00000130298.3</a>	663	<a href="#">116aa</a>	Nonsense mediated decay	-	<a href="#">A0A0A6YY82</a>	TSL:5
Angel2-208	<a href="#">ENSMUST00000137608.7</a>	1585	No protein	Retained intron	-	-	TSL:1
Angel2-206	<a href="#">ENSMUST00000134187.1</a>	1135	No protein	Retained intron	-	-	TSL:1
Angel2-210	<a href="#">ENSMUST00000146048.1</a>	632	No protein	Retained intron	-	-	TSL:2
Angel2-209	<a href="#">ENSMUST00000144693.1</a>	3343	No protein	lncRNA	-	-	TSL:1

# Genomic location distribution





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

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