

Dennd6a Cas9-KO Strategy

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Project Overview

Project Name

Dennd6a

Project type

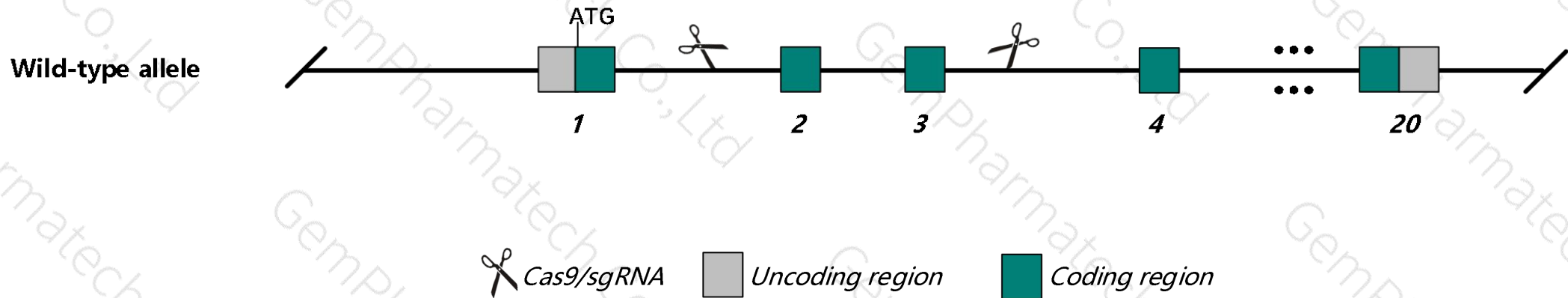
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Dennd6a* gene. The schematic diagram is as follows:



- The *Dennd6a* gene has 6 transcripts. According to the structure of *Dennd6a* gene, exon2-exon3 of *Dennd6a-201* (ENSMUST00000037585.8) transcript is recommended as the knockout region. The region contains 82bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Dennd6a* gene. The brief process is as follows: CRISPR/Cas9 syst

- The *Dennd6a* gene is located on the Chr14. 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)

Dennd6a DENN/MADD domain containing 6A [*Mus musculus* (house mouse)]







Gene ID: 211922, updated on 13-Mar-2020

Summary

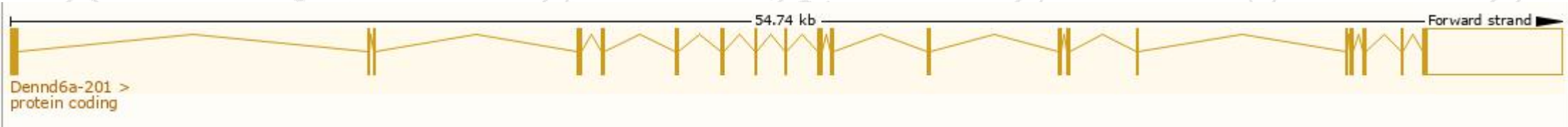
Official Symbol	Dennd6a provided by MGI
Official Full Name	DENN/MADD domain containing 6A provided by MGI
Primary source	MGI:MGI:2442980
See related	Ensembl:ENSMUSG000000040818
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Fam116a
Expression	Ubiquitous expression in placenta adult (RPKM 4.7), bladder adult (RPKM 4.3) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

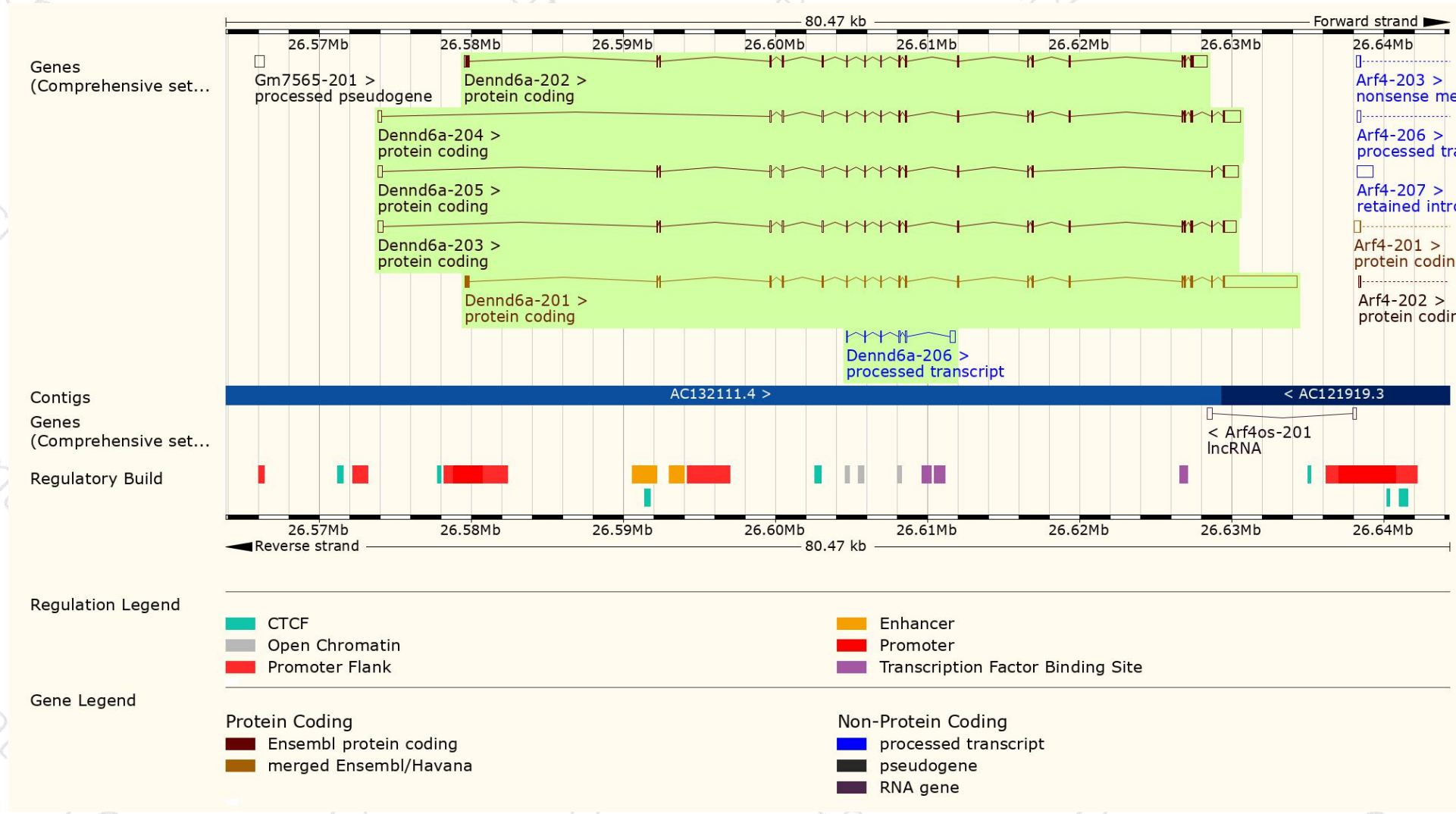
The gene has 6 transcripts,all transcripts are shown below:

Name ▲	Transcript ID ▲	bp ▲	Protein ▲	Biotype ▲	CCDS ▲	UniProt ▲	Flags ▲
Dennd6a-201	ENSMUST00000037585.8	6638	605aa	 Protein coding	CCDS49430	Q8BH65	TSL:1 GENCODE basic APPRIS P1
Dennd6a-202	ENSMUST00000203874.2	2677	559aa	 Protein coding	CCDS84101	Q8BH65	TSL:1 GENCODE basic
Dennd6a-203	ENSMUST00000224111.1	2692	381aa	 Protein coding	-	Q8BH65	GENCODE basic
Dennd6a-204	ENSMUST00000224248.1	2775	381aa	 Protein coding	-	Q8BH65	GENCODE basic
Dennd6a-205	ENSMUST00000224378.1	2424	255aa	 Protein coding	-	A0A286YDD5	GENCODE basic
Dennd6a-206	ENSMUST00000225206.1	738	No protein	 Processed transcript	-	-	-

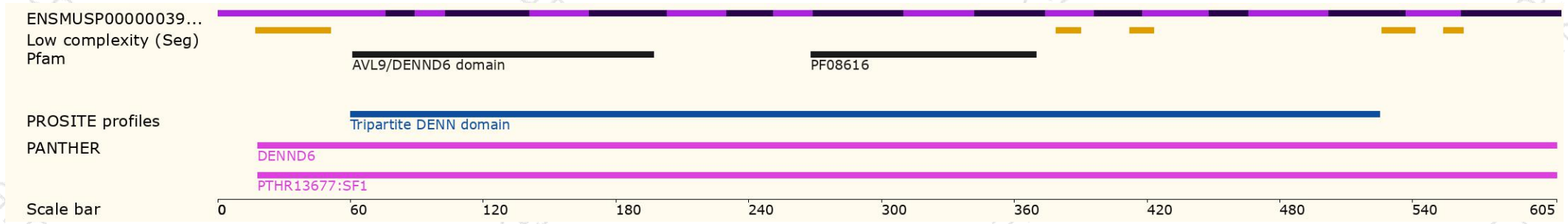
The strategy is based on the design of *Dennd6a-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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