

Naa11 Cas9-KO Strategy

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Project Overview

Project Name

Naa11

Project type

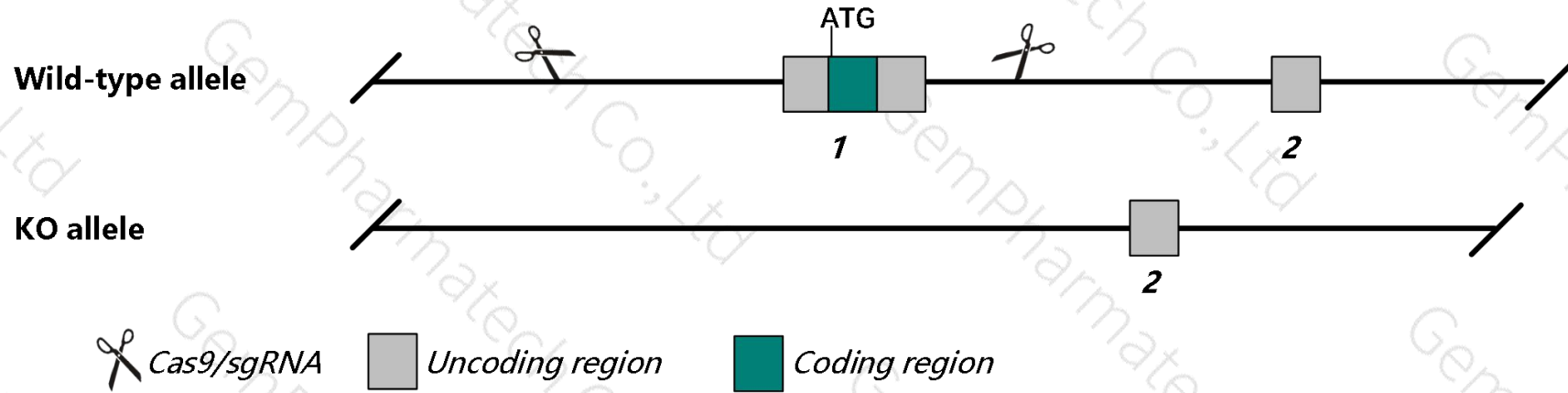
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Naa11* gene. The schematic diagram is as follows:



- The *Naa11* gene has 1 transcript. According to the structure of *Naa11* gene, exon1 of *Naa11-201* (ENSMUST00000060265.5) transcript is recommended as the knockout region. The region contains all of the coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Naa11* gene. The brief process is as follows: CRISPR/Cas9 system

- *4930467D21Rik* gene will be destroyed.
- The *Naa11* gene is located on the Chr5. 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)



Naa11 N(alpha)-acetyltransferase 11, NatA catalytic subunit [*Mus musculus* (house mouse)]

Gene ID: 97243, updated on 10-Oct-2019

Summary

- Official Symbol** Naa11 provided by [MGI](#)
- Official Full Name** N(alpha)-acetyltransferase 11, NatA catalytic subunit provided by [MGI](#)
- Primary source** [MGI:MGI:2141314](#)
- See related** [Ensembl:ENSMUSG00000046000](#)
- Gene type** protein coding
- RefSeq status** PROVISIONAL
- Organism** [Mus musculus](#)
- Lineage** Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
- Also known as** Ard2; Ard1b; C80008
- Expression** Restricted expression toward testis adult (RPKM 4.4) [See more](#)
- Orthologs** [human](#) [all](#)

Genomic context

Location: 5; 5 E3

Exon count: 2

See Naa11 in [Genome Data Viewer](#)

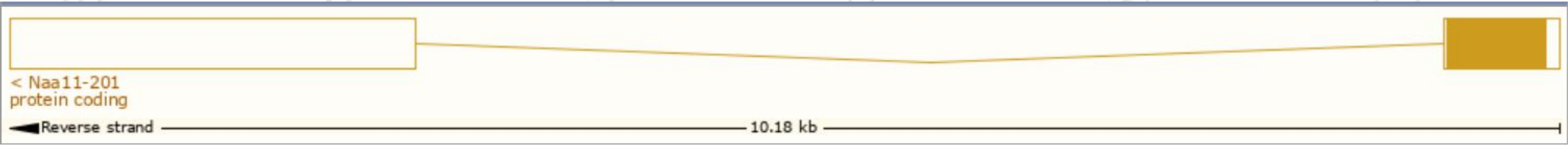
| Annotation release | Status | Assembly | Chr | Location |
|---------------------|-------------------|--|-----|--|
| 108 | current | GRCm38.p6 (GCF_000001635.26) | 5 | NC_000071.6 (97382209..97392330, complement) |
| Build 37.2 | previous assembly | MGSCv37 (GCF_000001635.18) | 5 | NC_000071.5 (97811228..97821349, complement) |

Transcript information (Ensembl)

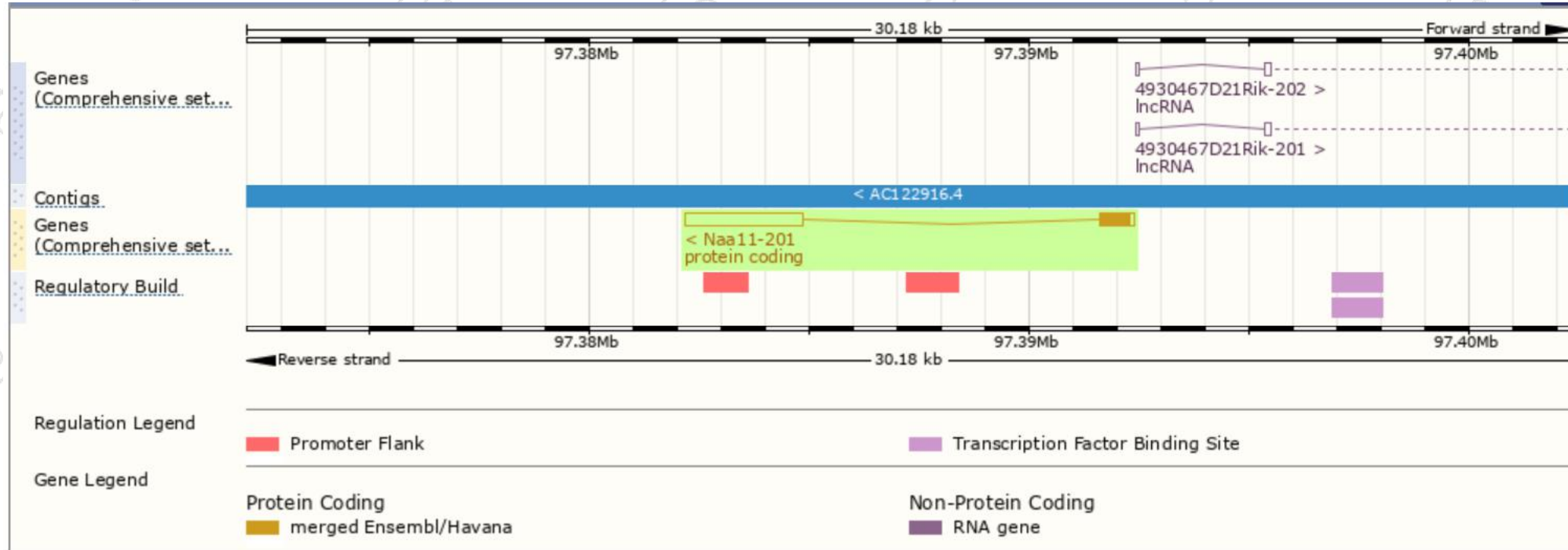
The gene has 1 transcript,the transcript is shown below:

| Name | Transcript ID | bp | Protein | Biotype | CCDS | UniProt | Flags |
|-----------|--------------------------------------|------|-----------------------|----------------|---------------------------|---|-------------------------------|
| Naa11-201 | ENSMUST00000060265.5 | 3424 | 218aa | Protein coding | CCDS19453 | A8W660 Q3UX61 | TSL:1 Gencode basic APPRIS P1 |

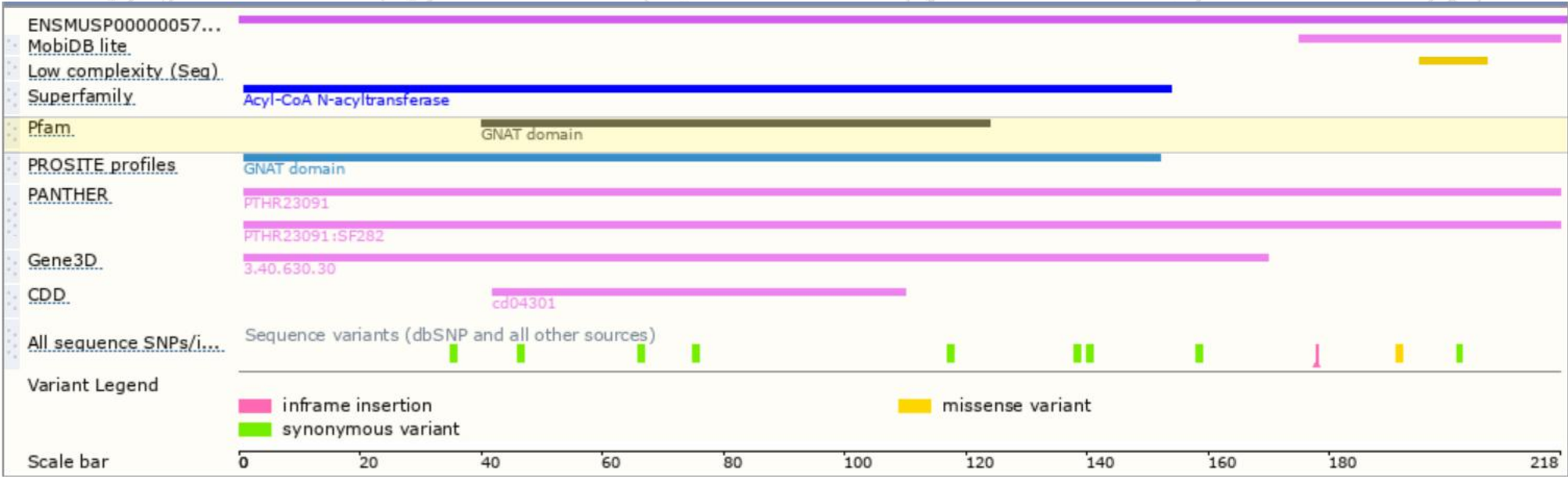
The strategy is based on the design of *Naa11-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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