

Nnmt Cas9-KO Strategy

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Project Overview

Project Name

Nnmt

Project type

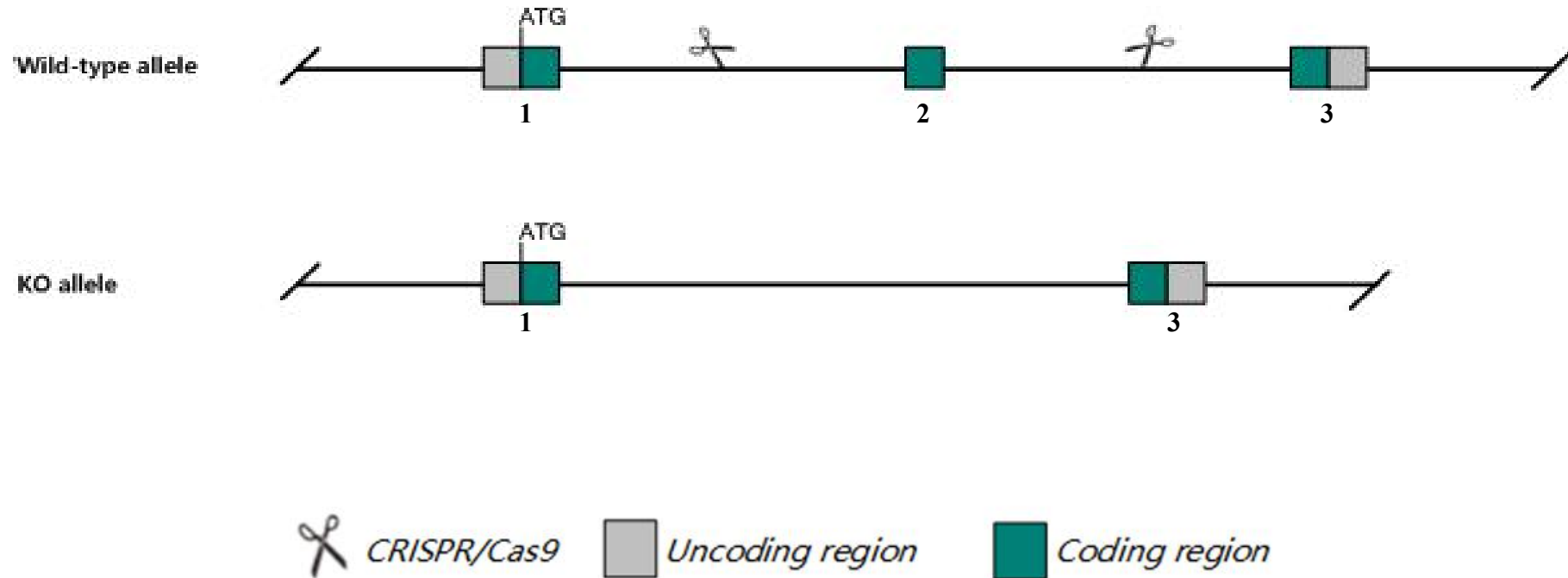
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

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



The *Nnmt* gene has 5 transcripts. According to the structure of *Nnmt* gene, exon2 of *Nnmt-201* (ENSMUST00000034808.11) transcript is recommended as the knockout region. The region contains 208bp coding sequence. Knock out the region will result in disruption of protein function.

In this project we use CRISPR/Cas9 technology to modify *Nnmt* gene. The brief process is as follows: CRISPR/Cas9 system

The *Nnmt* gene is located on the Chr9. 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.

Nnmt nicotinamide N-methyltransferase [Mus musculus (house mouse)]

Gene ID: 18113, updated on 31-Jan-2019

Summary



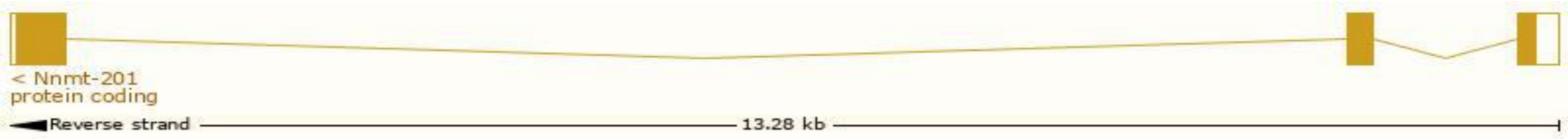
Official Symbol	Nnmt provided by MGI
Official Full Name	nicotinamide N-methyltransferase provided by MGI
Primary source	MGI:MGI:1099443
See related	Ensembl:ENSMUSG00000032271
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Expression	Biased expression in liver adult (RPKM 9.1), subcutaneous fat pad adult (RPKM 7.8) and 7 other tissues See more
Orthologs	human all

Transcript information Ensembl

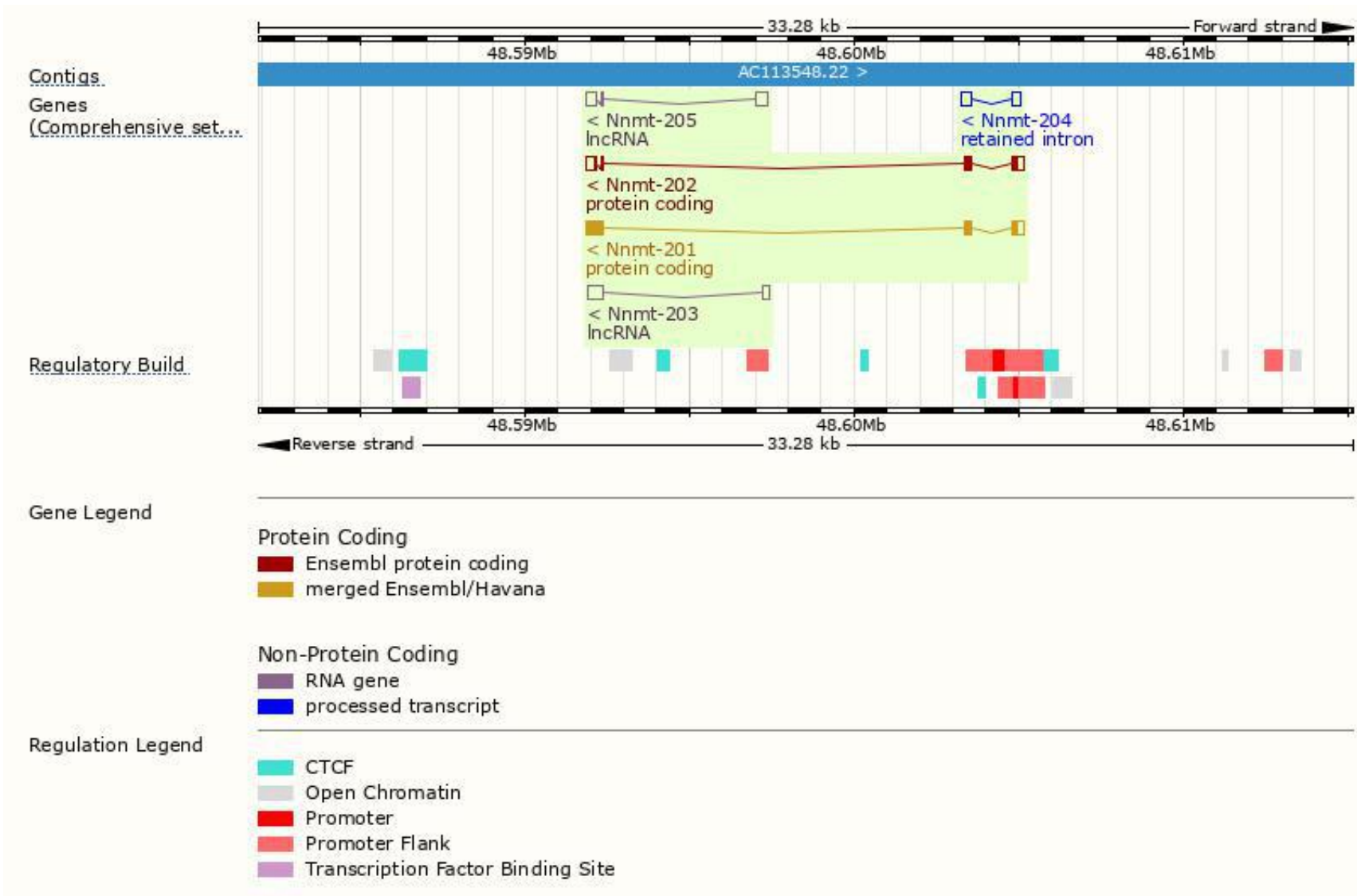
The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Nnmt-201	ENSMUST00000034808.11	1043	264aa	Protein coding	CCDS23157	O55239	TSL:1 GENCODE basic APPRIS P1
Nnmt-202	ENSMUST00000119426.1	912	157aa	Protein coding	CCDS80991	D3YX59	TSL:1 GENCODE basic
Nnmt-204	ENSMUST00000128076.1	558	No protein	Retained intron	-	-	TSL:2
Nnmt-205	ENSMUST00000136813.1	737	No protein	lncRNA	-	-	TSL:3
Nnmt-203	ENSMUST00000126109.1	699	No protein	lncRNA	-	-	TSL:1

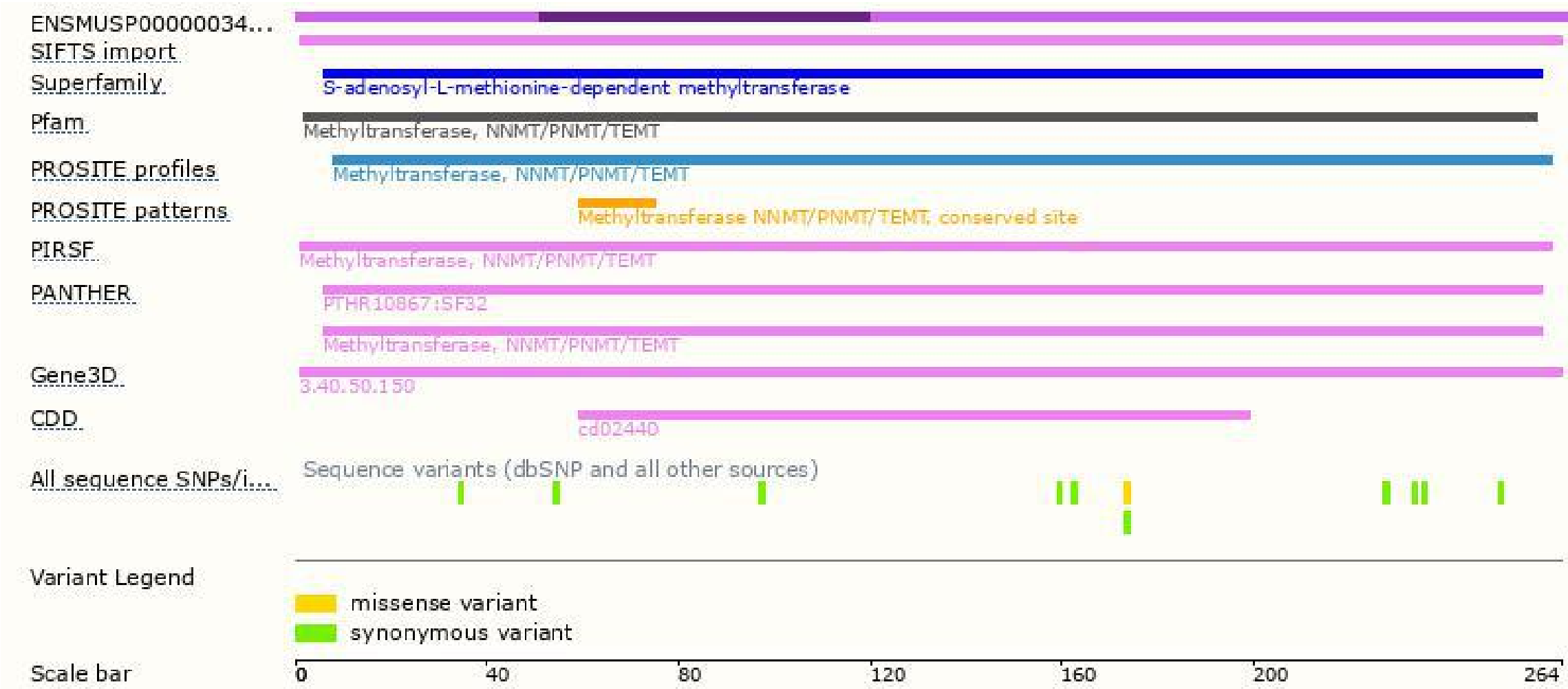
The strategy is based on the design of *Nnmt-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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