

Prmt6 Cas9-KO Strategy

Designer:

Yang Zeng

Reviewer:

Jing Jin

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Project Overview

Project Name

Prmt6

Project type

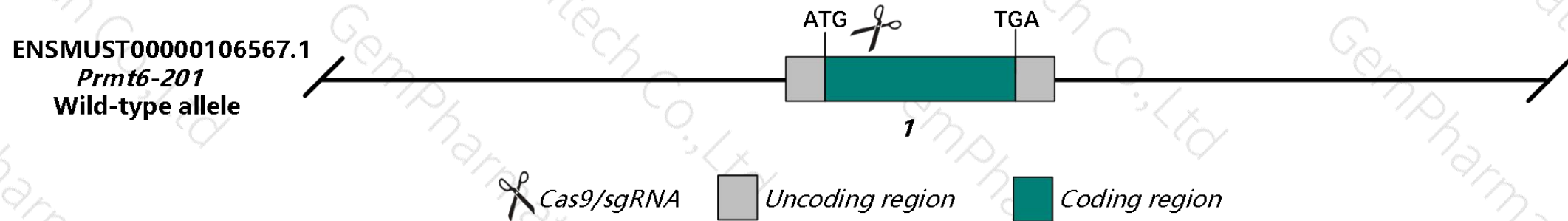
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Prmt6* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Prmt6* 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 *Prmt6* gene is located on the Chr3. 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)

Prmt6 protein arginine N-methyltransferase 6 [*Mus musculus* (house mouse)]

Gene ID: 99890, updated on 27-Aug-2019

Summary

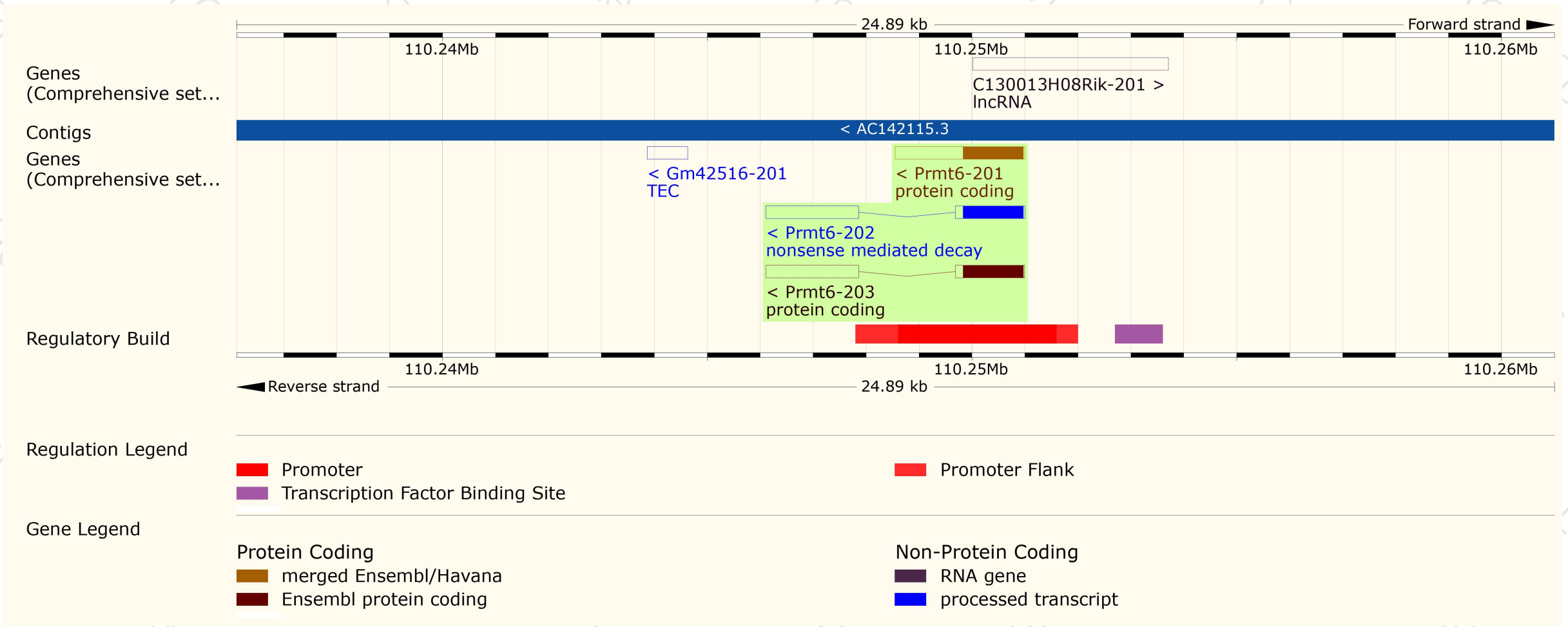
Official Symbol	Prmt6 provided by MGI
Official Full Name	protein arginine N-methyltransferase 6 provided by MGI
Primary source	MGI:MGI:2139971
See related	Ensembl:ENSMUSG00000049300
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Hrmt1l6; AW124876; BB233495
Expression	Ubiquitous expression in ovary adult (RPKM 8.9), adrenal adult (RPKM 6.9) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

The gene has 3 transcripts,all transcripts are shown below:

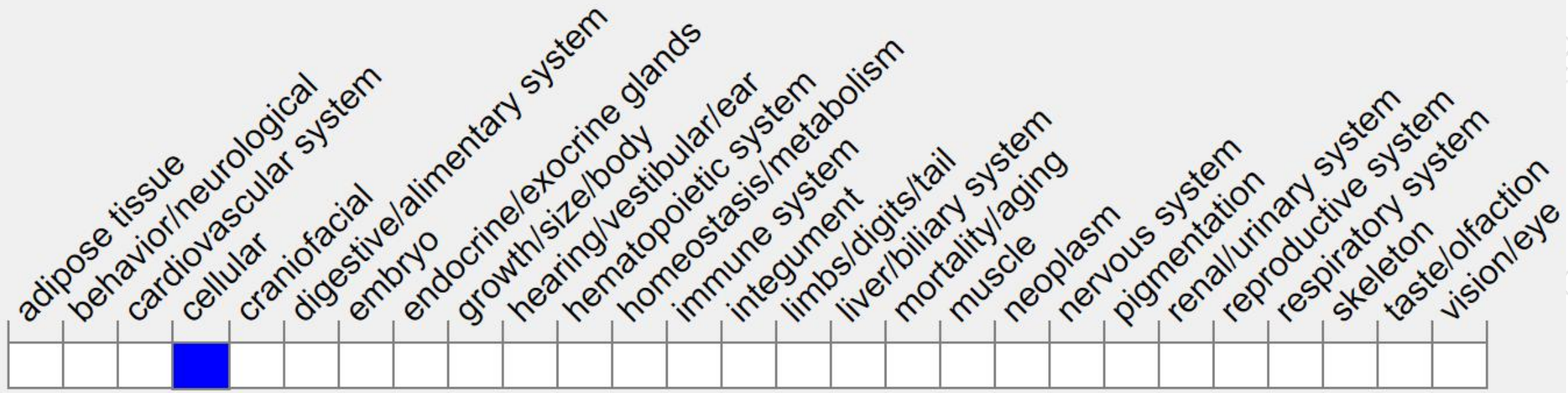
Name	Transcript ID	bp	Protein	Translation ID	Biotype	CCDS	UniProt	Flags
Prmt6-203	ENSMUST00000190378.1	3051	378aa	ENSMUSP00000140836.1	Protein coding	CCDS38605	Q6NZB1	TSL:1 Gencode basic APPRIS P1
Prmt6-201	ENSMUST00000106567.1	2450	378aa	ENSMUSP00000102177.1	Protein coding	CCDS38605	Q6NZB1	TSL:NA Gencode basic APPRIS P1
Prmt6-202	ENSMUST00000168412.2	3059	378aa	ENSMUSP00000129801.1	Nonsense mediated decay	CCDS38605	Q6NZB1	TSL:1

Genomic location distribution



Mouse phenotype description(MGI)

Phenotype Overview ?



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

Mice homozygous for a knock-out allele exhibit decreased mouse embryonic fibroblast proliferation and early cellular replicative senescence.

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

Tel: 025-5864 1534

