

Hnrnp Cas9-KO Strategy

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Project Overview

Project Name

Hnrnpm

Project type

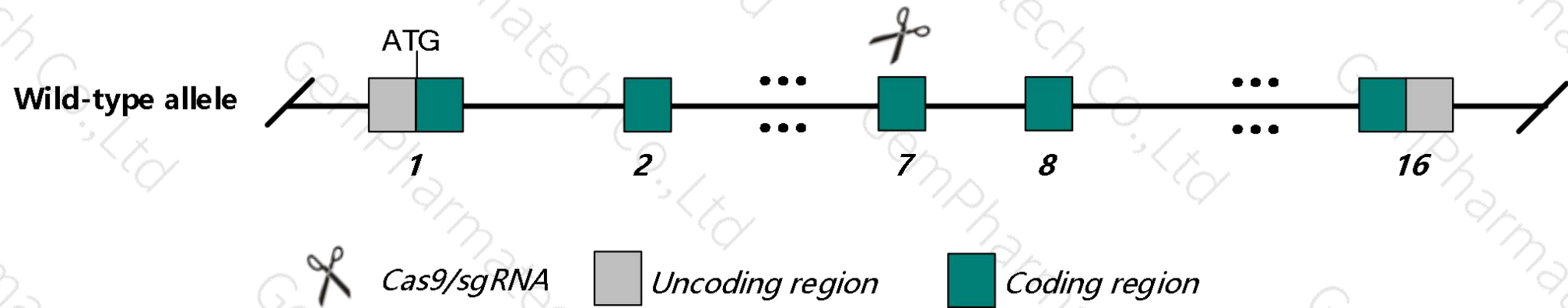
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

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



- In this project we use CRISPR/Cas9 technology to modify *Hnrnpm* 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 *Hnrnpm* gene is located on the Chr17. 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)

Hnrnpm heterogeneous nuclear ribonucleoprotein M [*Mus musculus* (house mouse)]

Gene ID: 76936, updated on 12-Aug-2019

Summary

- Official Symbol Hnrnpm provided by [MGI](#)
- Official Full Name heterogeneous nuclear ribonucleoprotein M provided by [MGI](#)
- Primary source [MGI:MGI:1926465](#)
- See related [Ensembl:ENSMUSG00000059208](#)
- 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 Hnrpm; AA409009; mKIAA4193; 2610023M21Rik
- Expression Ubiquitous expression in CNS E11.5 (RPKM 154.1), liver E14 (RPKM 82.1) and 28 other tissues [See more](#)
- Orthologs [human](#) [all](#)

Genomic context

Location: 17; 17 B1

See Hnrnpm in [Genome Data Viewer](#)

Exon count: 16

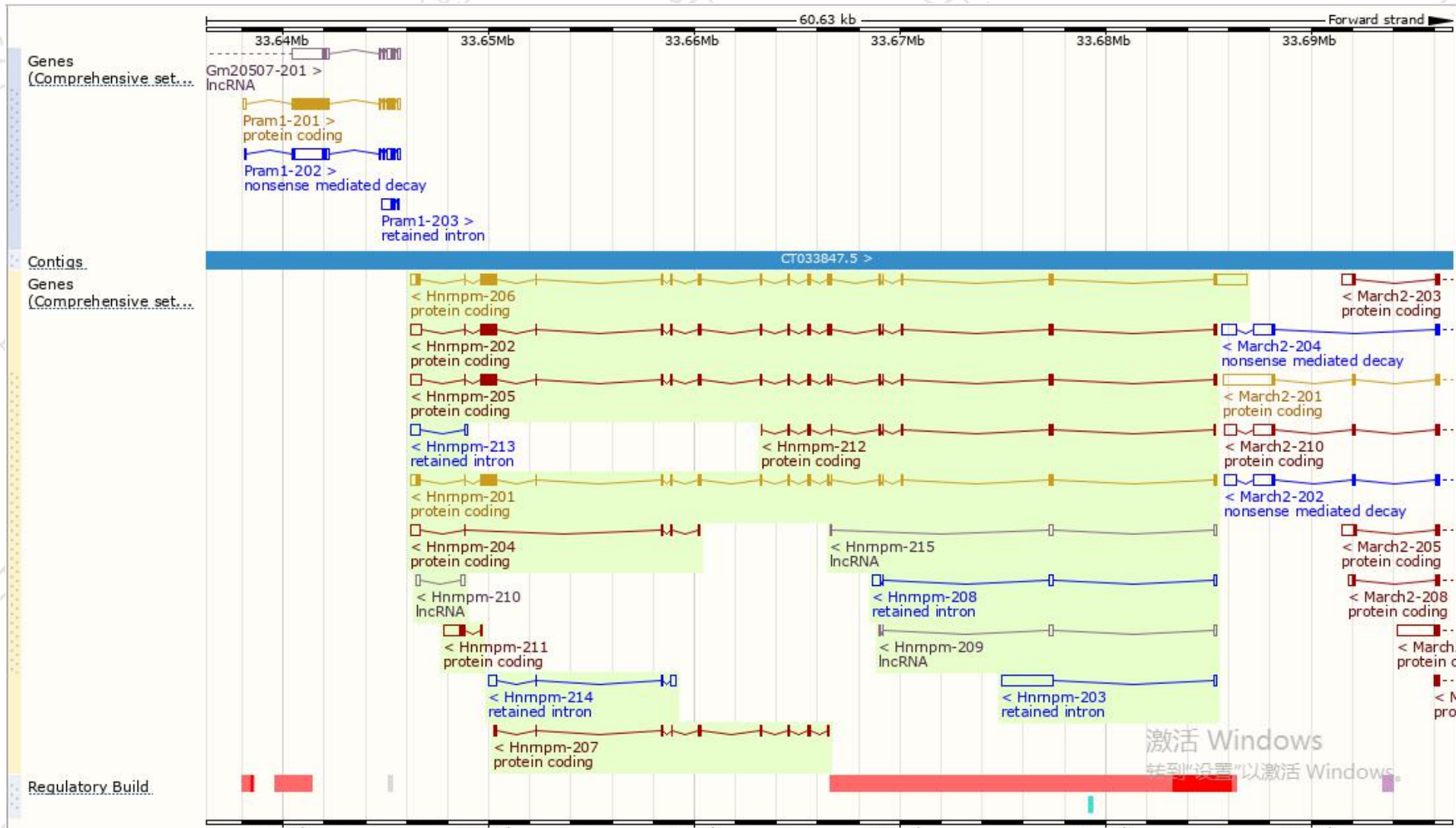
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	17	NC_000083.6 (33646233..33685458, complement)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	17	NC_000083.5 (33783178..33822403, complement)

Transcript information (Ensembl)

The gene has 15 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Hnrnpm-206	ENSMUST00000148178.7	3934	729aa	Protein coding	CCDS37570	Q9D0E1	TSL:1 GENCODE basic APPRIS P3
Hnrnpm-201	ENSMUST00000087582.12	2370	690aa	Protein coding	CCDS50068	Q3THB3 Q9D0E1	TSL:1 GENCODE basic APPRIS ALT2
Hnrnpm-202	ENSMUST00000114385.8	2550	679aa	Protein coding	-	B8JK32	TSL:2 GENCODE basic
Hnrnpm-205	ENSMUST00000139302.7	2428	640aa	Protein coding	-	B8JK33	TSL:1 GENCODE basic
Hnrnpm-211	ENSMUST00000234297.1	1130	123aa	Protein coding	-	-	CDS 5' incomplete
Hnrnpm-207	ENSMUST00000148258.1	729	243aa	Protein coding	-	F6W322	CDS 5' and 3' incomplete TSL:3
Hnrnpm-212	ENSMUST00000234474.1	711	237aa	Protein coding	-	-	CDS 5' and 3' incomplete
Hnrnpm-204	ENSMUST00000130946.7	634	57aa	Protein coding	-	F7C9U3	CDS 5' incomplete TSL:3
Hnrnpm-203	ENSMUST00000127598.2	2626	No protein	Retained intron	-	-	TSL:1
Hnrnpm-214	ENSMUST00000234960.1	761	No protein	Retained intron	-	-	-
Hnrnpm-208	ENSMUST00000153608.1	735	No protein	Retained intron	-	-	TSL:2
Hnrnpm-213	ENSMUST00000234893.1	591	No protein	Retained intron	-	-	-
Hnrnpm-215	ENSMUST00000235089.1	401	No protein	lncRNA	-	-	-
Hnrnpm-210	ENSMUST00000234099.1	391	No protein	lncRNA	-	-	-
Hnrnpm-209	ENSMUST00000234043.1	380	No protein	lncRNA	-	-	-

Genomic location distribution



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

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