

$Snx16$ Cas9-KO Strategy

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Reviewer:

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Project Overview

Project Name

Snx16

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Snx16* gene. The schematic diagram is as follows:



- The *Snx16* gene has 3 transcripts. According to the structure of *Snx16* gene, exon2-exon4 of *Snx16-202* (ENSMUST00000099223.10) transcript is recommended as the knockout region. The region contains start codon ATG. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Snx16* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Snx16* 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)

Snx16 sorting nexin 16 [Mus musculus (house mouse)]

Gene ID: 74718, updated on 31-Jan-2019

Summary



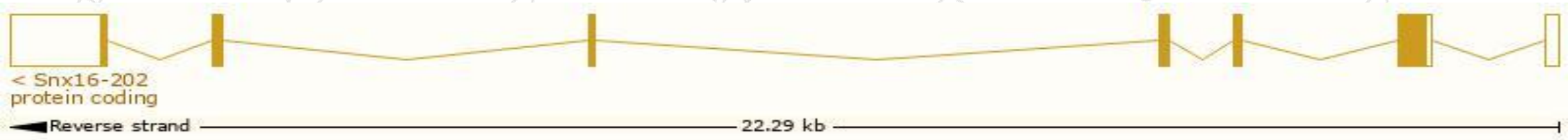
Official Symbol	Snx16 provided by MGI
Official Full Name	sorting nexin 16 provided by MGI
Primary source	MGI:MGI:1921968
See related	Ensembl:ENSMUSG000000027534
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	4930522N22Rik, AI117577, AI747675
Expression	Biased expression in CNS E18 (RPKM 13.8), whole brain E14.5 (RPKM 7.3) and 12 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

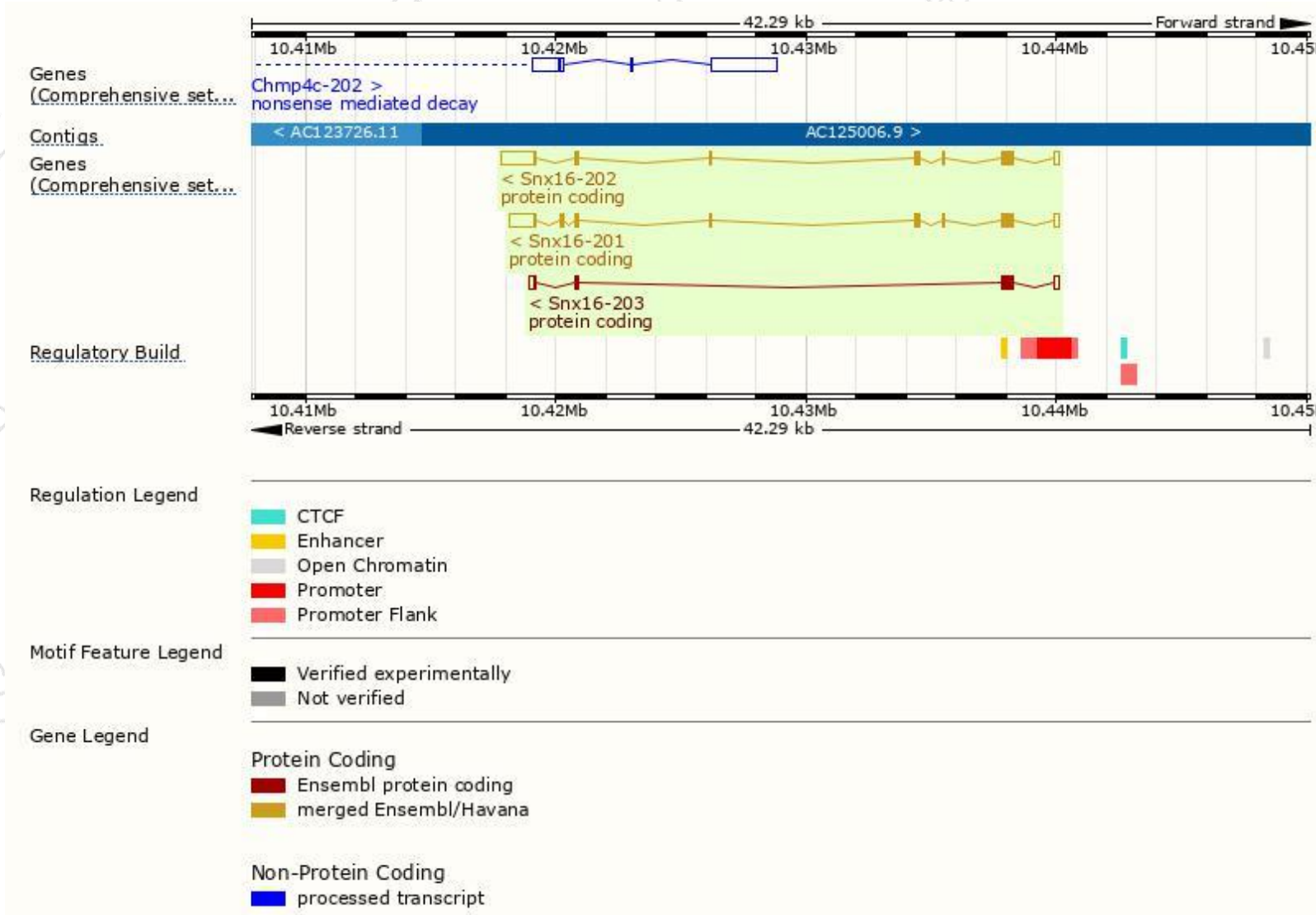
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Snx16-202	ENSMUST00000099223.10	2512	304aa	Protein coding	CCDS50862	Q3TLM7	TSL:1 GENCODE basic APPRIS ALT2
Snx16-201	ENSMUST00000029047.11	2288	344aa	Protein coding	CCDS17244	Q8C080	TSL:1 GENCODE basic APPRIS P3
Snx16-203	ENSMUST00000195822.1	1084	202aa	Protein coding	-	Q8BLP0	TSL:1 GENCODE basic

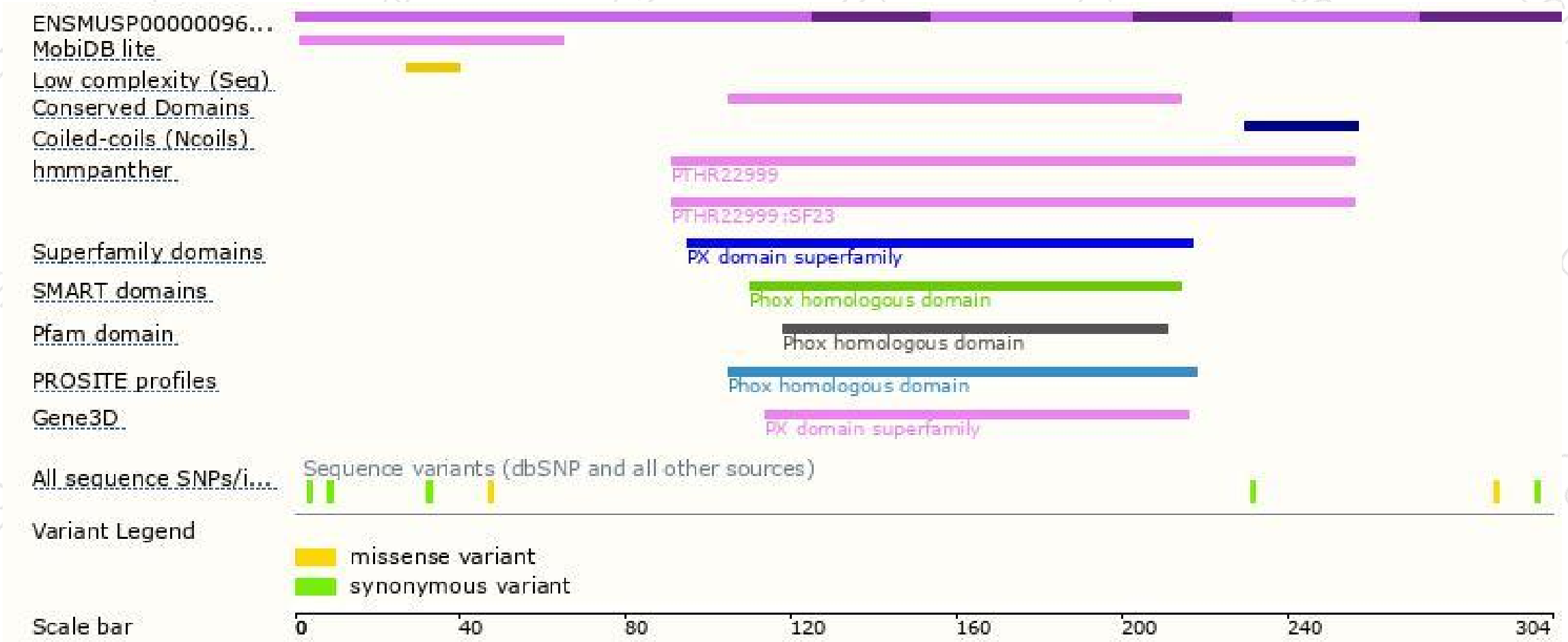
The strategy is based on the design of *Snx16-202* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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