

Slc25a26 Cas9-KO Strategy

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Project Overview

Project Name

Slc25a26

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Slc25a26* gene. The schematic diagram is as follows:



- The *Slc25a26* gene has 7 transcripts. According to the structure of *Slc25a26* gene, exon2 of *Slc25a26-201* (ENSMUST00000061118.10) transcript is recommended as the knockout region. The region contains 157bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Slc25a26* gene. The brief process is as follows: CRISPR/Cas9 syst

- According to the existing MGI data, Embryos homozygous for a transposon insertion appear growth retarded and underdeveloped and die after E8.5 but prior to birth.
- The *Slc25a26* gene is located on the Chr6. 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)

Slc25a26 solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 26 [Mus musculus (house mouse)]

Gene ID: 67582, updated on 31-Jan-2019

Summary



Official Symbol Slc25a26 provided by [MGI](#)

Official Full Name solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 26 provided by [MGI](#)

Primary source [MGI:MGI:1914832](#)

See related [Ensembl:ENSMUSG00000045100](#)

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 4930433D19Rik, 4933433F13Rik, AW557176, D6Bwg0781e, Slc25a6

Expression Ubiquitous expression in testis adult (RPKM 4.5), heart adult (RPKM 4.1) and 28 other tissues [See more](#)

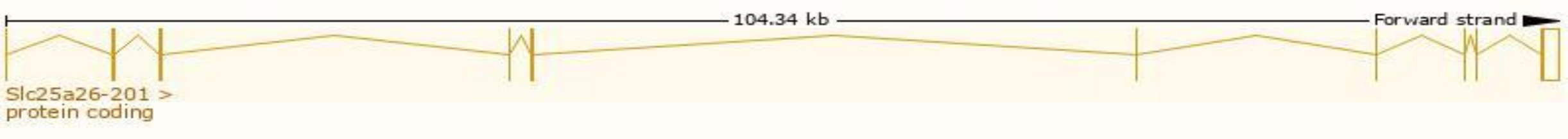
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

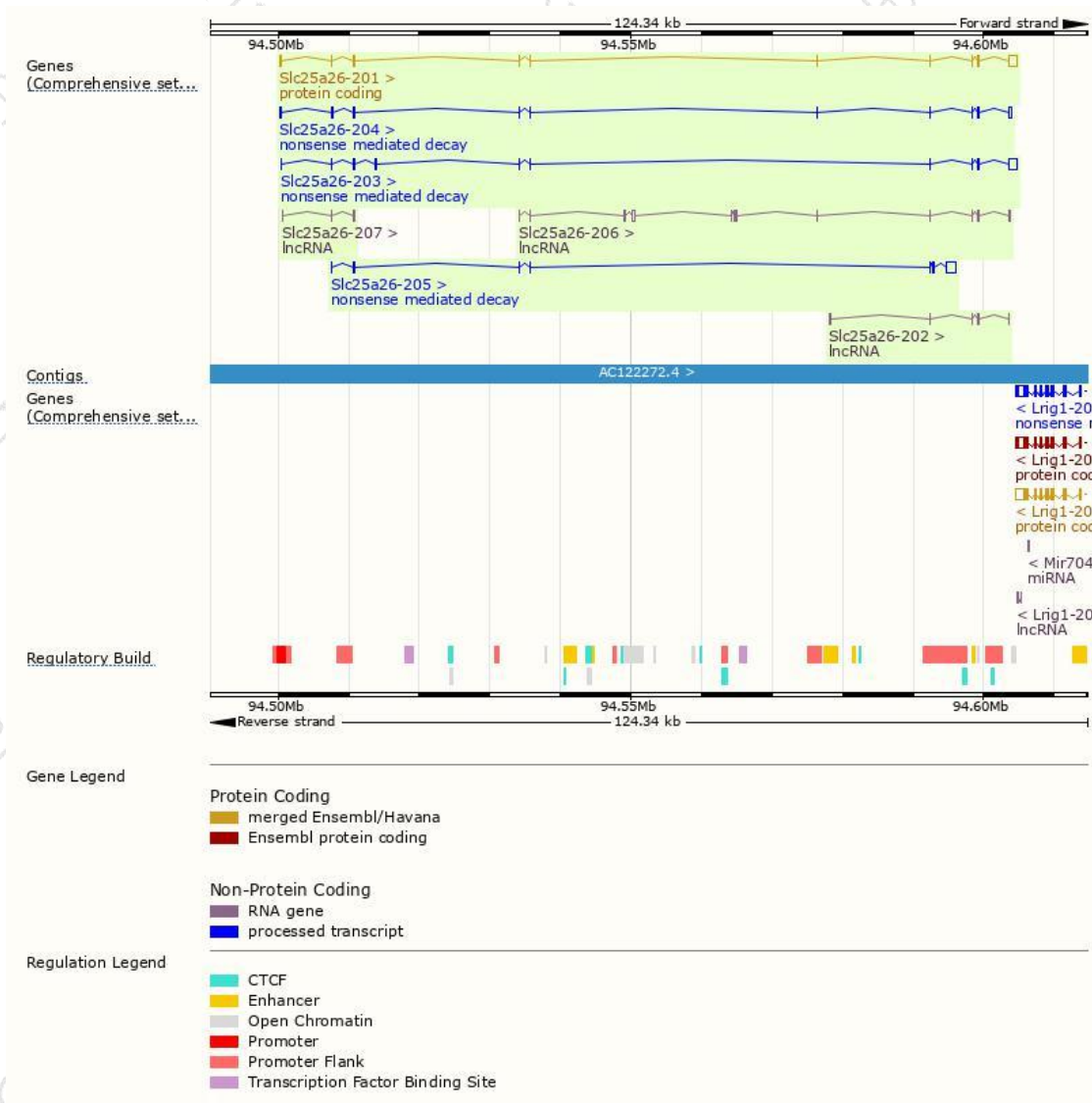
The gene has 7 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Slc25a26-201	ENSMUST00000061118.10	1922	274aa	Protein coding	CCDS20379	Q5U680	TSL:1 GENCODE basic APPRIS P1
Slc25a26-203	ENSMUST00000204235.2	2076	121aa	Nonsense mediated decay	-	A0A0N4SW11	TSL:1
Slc25a26-205	ENSMUST00000204985.1	2048	155aa	Nonsense mediated decay	-	A0A0N4SVB1	CDS 5' incomplete TSL:1
Slc25a26-204	ENSMUST00000204764.2	1339	83aa	Nonsense mediated decay	-	A0A0N4SUT5	TSL:1
Slc25a26-206	ENSMUST00000205173.2	1453	No protein	lncRNA	-	-	TSL:5
Slc25a26-202	ENSMUST00000203484.1	381	No protein	lncRNA	-	-	TSL:3
Slc25a26-207	ENSMUST00000205254.1	376	No protein	lncRNA	-	-	TSL:3

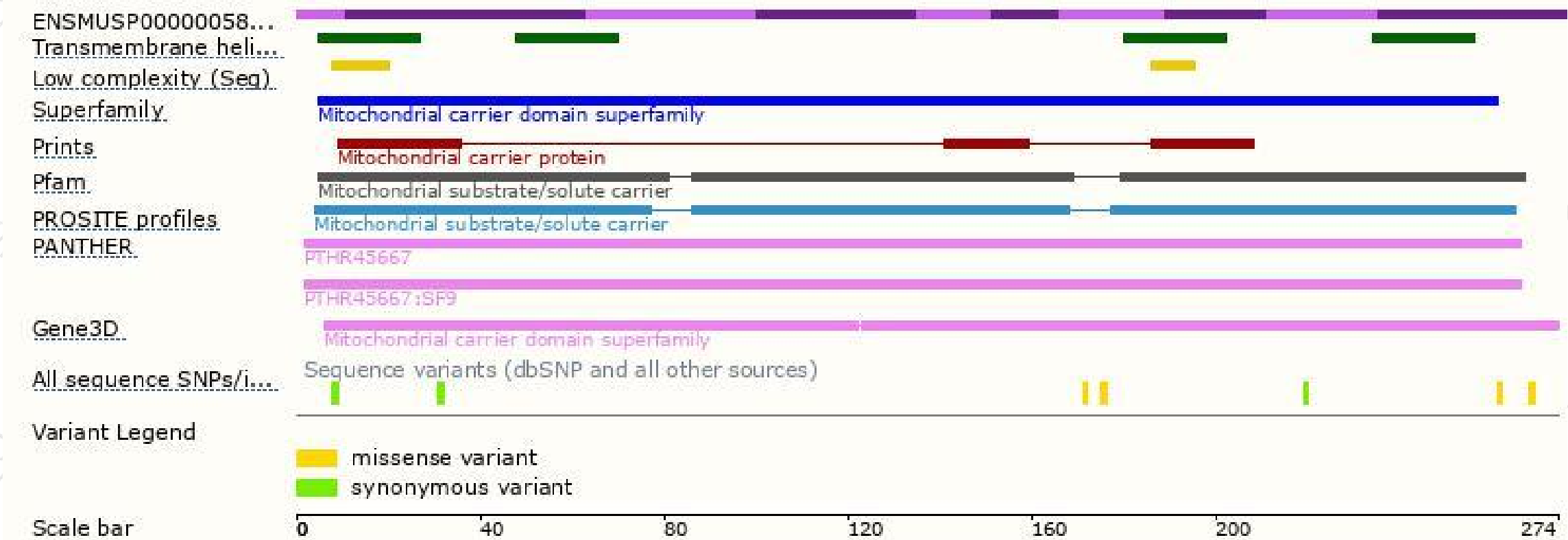
The strategy is based on the design of *Slc25a26-201* transcript,The transcription is shown below



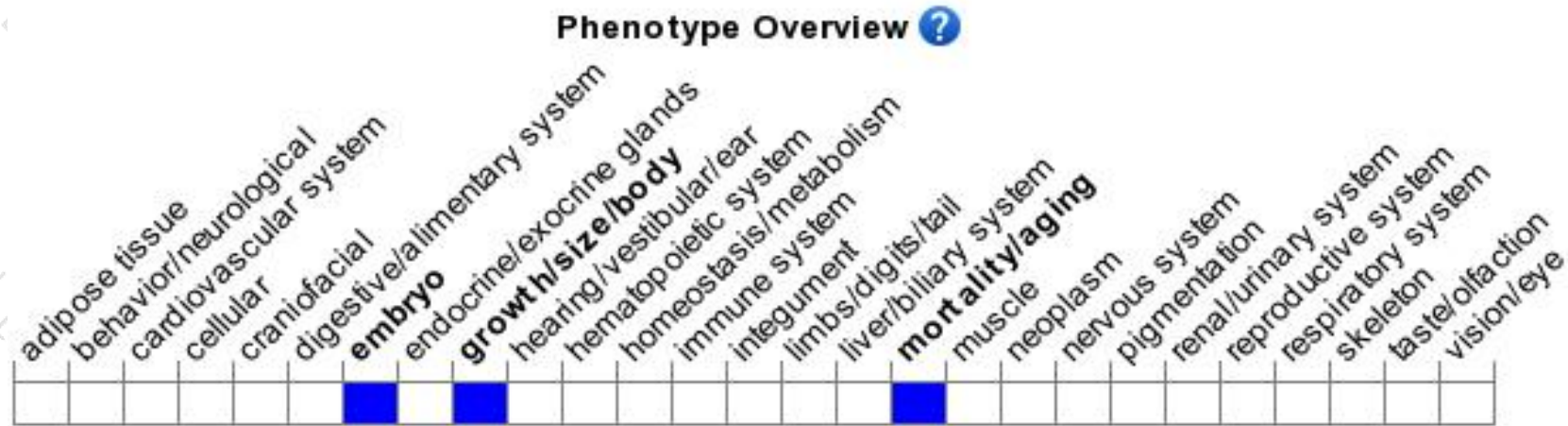
Genomic location distribution



Protein domain



Mouse phenotype description(MGI)



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

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

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