

Slc30a6 Cas9-KO Strategy

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Project Overview

Project Name

Slc30a6

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Slc30a6* gene. The schematic diagram is as follows:



- The *Slc30a6* gene has 9 transcripts. According to the structure of *Slc30a6* gene, exon2-exon10 of *Slc30a6-201* (ENSMUST00000024870.8) transcript is recommended as the knockout region. The region contains 662bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Slc30a6* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Slc30a6* 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)

Slc30a6 solute carrier family 30 (zinc transporter), member 6 [*Mus musculus* (house mouse)]

Gene ID: 210148, updated on 12-Aug-2019

Summary

- Official Symbol** Slc30a6 provided by [MGI](#)
- Official Full Name** solute carrier family 30 (zinc transporter), member 6 provided by [MGI](#)
- Primary source** [MGI:MGI:2386741](#)
- See related** [Ensembl:ENSMUSG00000024069](#)
- 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** ZnT6; 9530029F08Rik
- Expression** Ubiquitous expression in placenta adult (RPKM 12.8), large intestine adult (RPKM 9.7) and 28 other tissues [See more](#)
- Orthologs** [human](#) [all](#)

Genomic context

Location: 17; 17 E2

See Slc30a6 in [Genome Data Viewer](#)

Exon count: 14

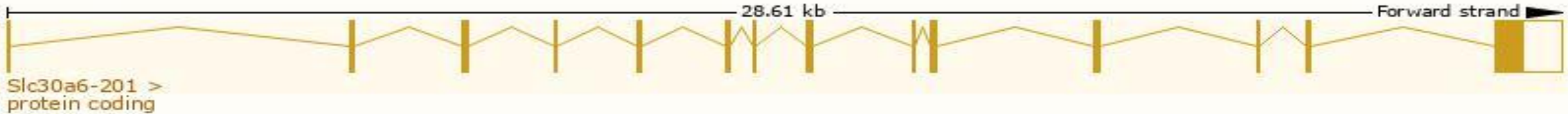
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	17	NC_000083.6 (74395578..74424229)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	17	NC_000083.5 (74794972..74823569)

Transcript information (Ensembl)

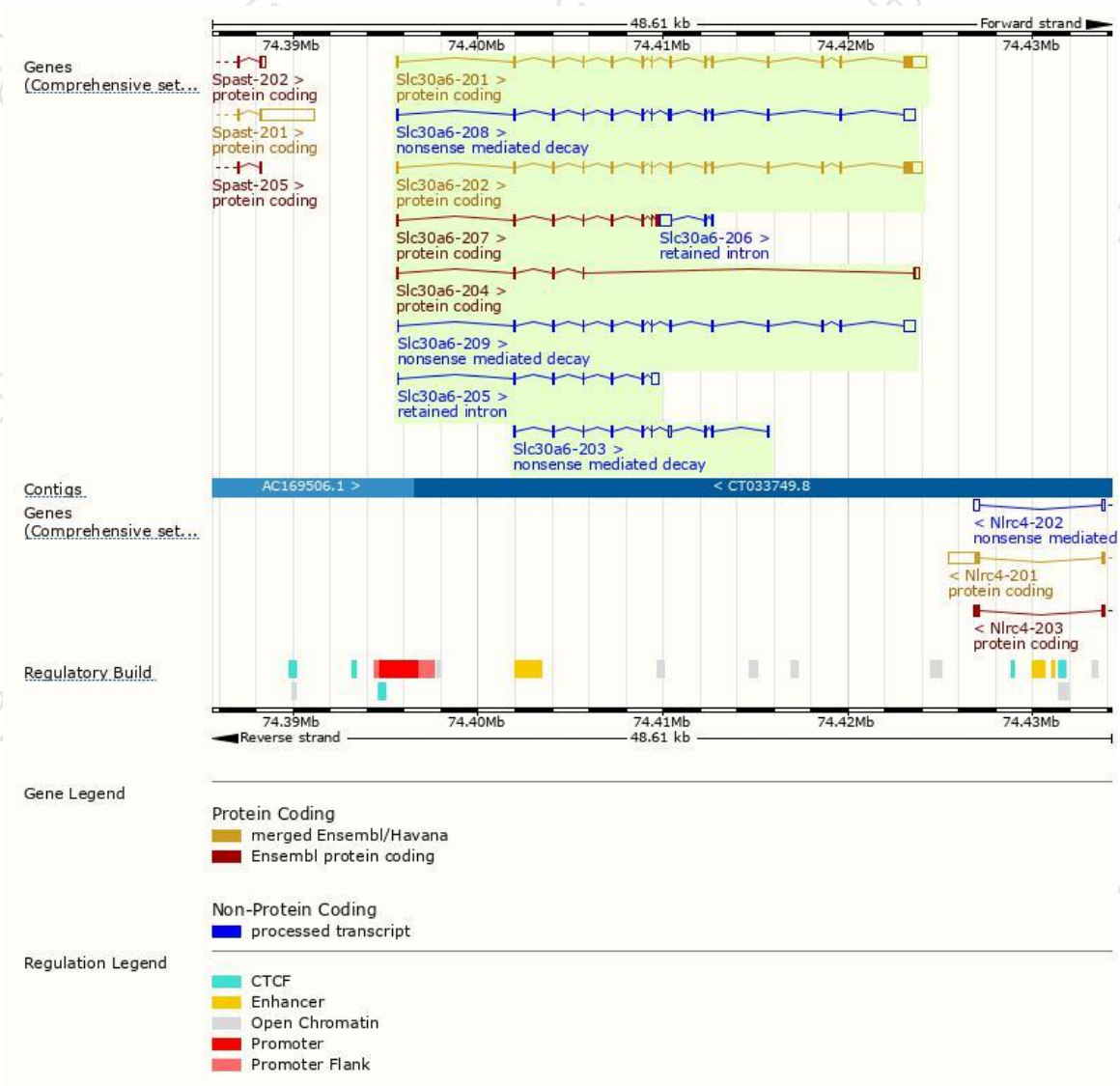
The gene has 9 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Slc30a6-201	ENSMUST00000024870.8	2148	460aa	Protein coding	CCDS37691	Q8BJM5	TSL:1 GENCODE basic APPRIS P1
Slc30a6-202	ENSMUST00000179074.8	1938	465aa	Protein coding	CCDS57109	J3QMX8	TSL:1 GENCODE basic
Slc30a6-207	ENSMUST00000233799.1	600	187aa	Protein coding	-	A0A3B2WCC9	CDS 3' incomplete
Slc30a6-204	ENSMUST00000233042.1	545	104aa	Protein coding	-	A0A3B2WCW5	GENCODE basic
Slc30a6-208	ENSMUST00000234515.1	1589	147aa	Nonsense mediated decay	-	-	
Slc30a6-209	ENSMUST00000235003.1	1507	181aa	Nonsense mediated decay	-	-	
Slc30a6-203	ENSMUST00000232866.1	813	140aa	Nonsense mediated decay	-	A0A3B2WCJ8	CDS 5' incomplete
Slc30a6-205	ENSMUST00000233157.1	816	No protein	Retained intron	-	-	
Slc30a6-206	ENSMUST00000233180.1	770	No protein	Retained intron	-	-	

The strategy is based on the design of *Slc30a6-201* 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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