

Chst12 Cas9-KO Strategy

Designer:

Bingxuan Li

Reviewer:

Huimin Su

Design Date:

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Project Overview

Project Name

Chst12

Project type

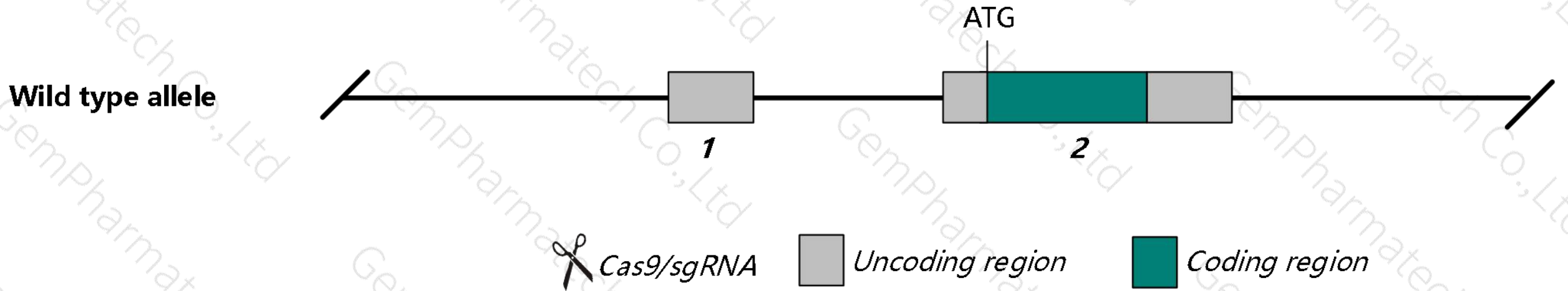
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Chst12* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Chst12* 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 *Chst12* gene is located on the Chr5. 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)

Chst12 carbohydrate sulfotransferase 12 [*Mus musculus* (house mouse)]

Gene ID: 59031, updated on 12-Aug-2019

Summary

Official Symbol Chst12 provided by MGI
Official Full Name carbohydrate sulfotransferase 12 provided by MGI
Primary source MGI:MGI:1929064
See related Ensembl:ENSMUSG00000036599
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 C4S-2; C4ST2; AI595374
Expression Ubiquitous expression in subcutaneous fat pad adult (RPKM 35.3), lung adult (RPKM 29.2) and 26 other tissues [See more](#)
Orthologs [human](#) [all](#)

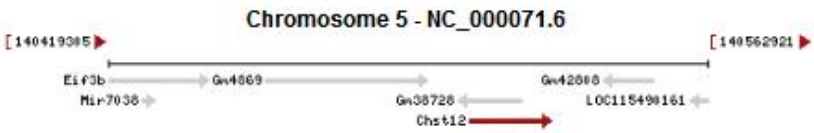
Genomic context

Location: 5; 5 G2

See Chst12 in [Genome Data Viewer](#)

Exon count: 2

Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	5	NC_000071.6 (140505569..140525238)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	5	NC_000071.5 (140981563..141001192)

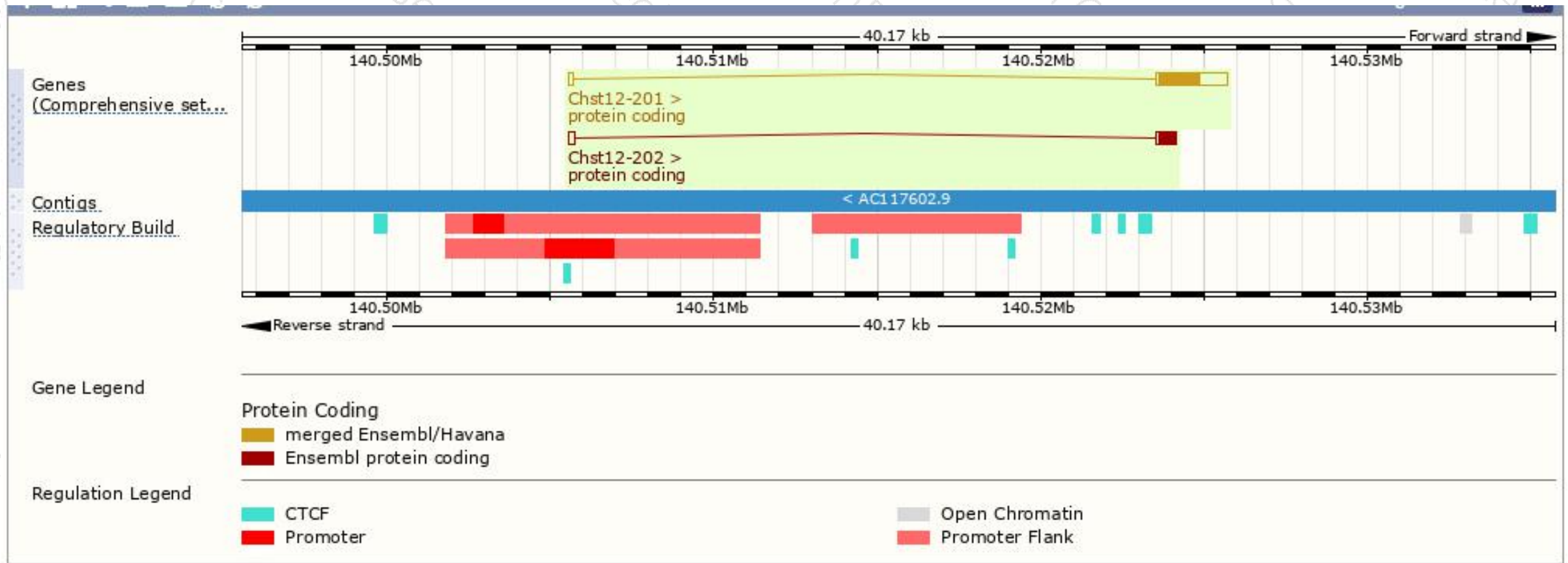


Transcript information (Ensembl)

The gene has 2 transcripts,all transcripts are shown below:

Show/hide columns (1 hidden)							Filter		
Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags		
Chst12-201	ENSMUST00000043050.8	2331	419aa	 Protein coding	CCDS19820	Q99LL3	TSL:1	GENCODE basic	APPRIS P1
Chst12-202	ENSMUST00000124142.1	766	178aa	 Protein coding	-	D3YUY0	CDS 3' incomplete	TSL:2	

Genomic location distribution



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

Tel: 025-5864 1534

