

Chchd5 Cas9-KO Strategy

Designer:

Bingxuan Li

Reviewer:

Huimin Su

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Project Overview

Project Name

Chchd5

Project type

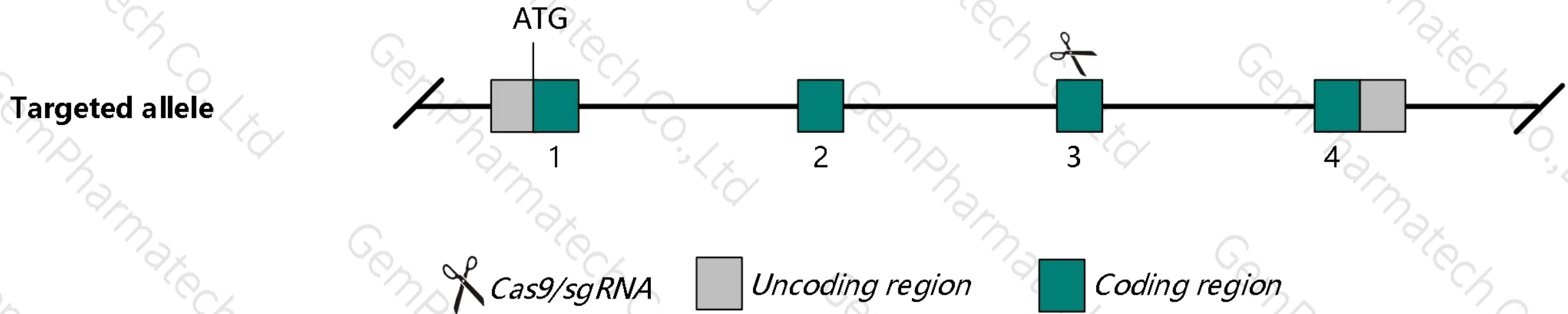
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Chchd5* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Chchd5* 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 *Chchd5* gene is located on the Chr2. 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)

Chchd5 coiled-coil-helix-coiled-coil-helix domain containing 5 [*Mus musculus* (house mouse)]

Gene ID: 66170, updated on 24-Jun-2016

Summary

Official Symbol	Chchd5 provided by MGI
Official Full Name	coiled-coil-helix-coiled-coil-helix domain containing 5 provided by MGI
Primary source	MGI:MGI:1913420
See related	Ensembl:ENSMUSG00000037938 Vega:OTTMUSG00000015423
Gene type	protein coding
RefSeq status	VALIDATED
Organism	<i>Mus musculus</i>
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	AW045710; 1110027L01Rik
Orthologs	human all

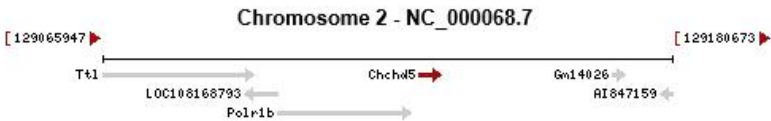
Genomic context

Location: 2; 2 F3

See Chchd5 in [Genome Data Viewer](#) [Epigenomics](#) [Map Viewer](#)

Exon count: 4

Annotation release	Status	Assembly	Chr	Location
106	current	GRCm38.p4 (GCF_000001635.24)	2	NC_000068.7 (129129700..129134112)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	2	NC_000068.6 (128955436..128959848)

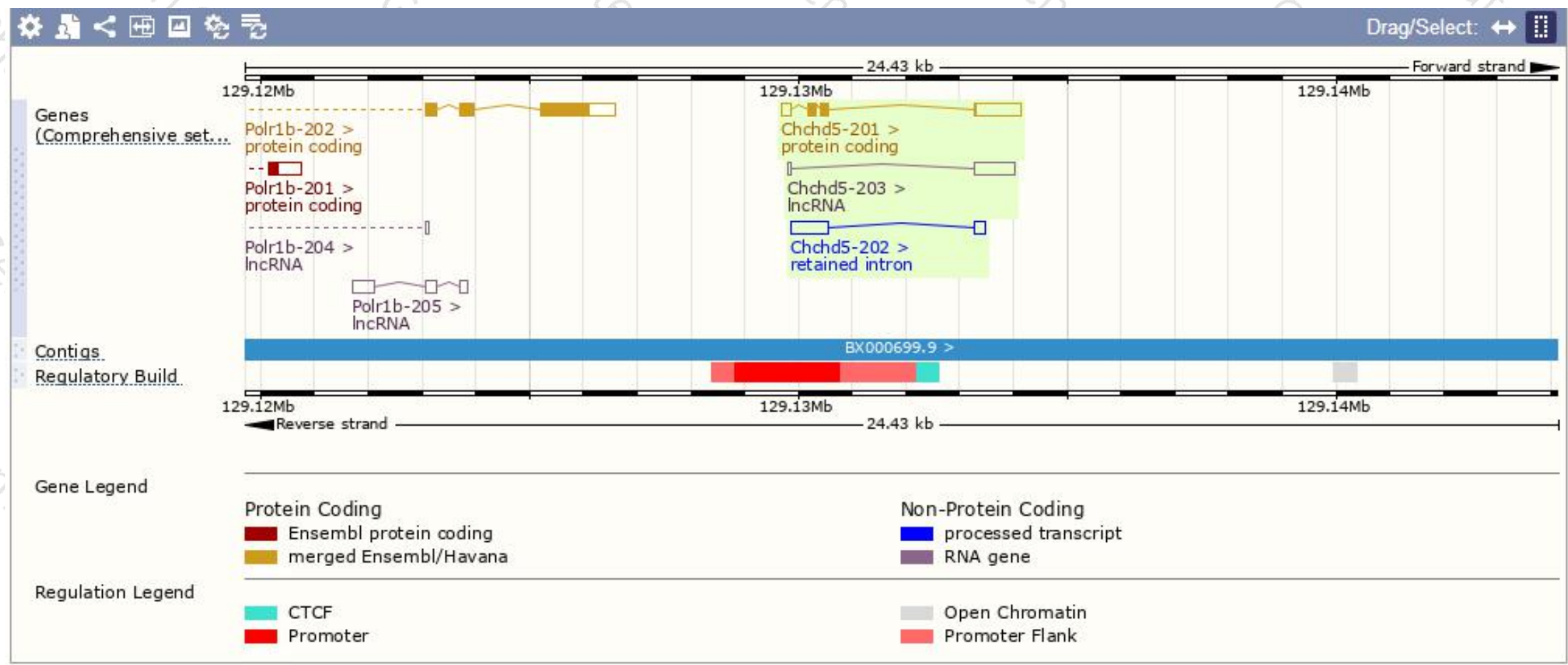


Transcript information (Ensembl)

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

Show/hide columns (1 hidden)							Filter	
Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags	
Chchd5-201	ENSMUST00000035481.4	1325	110aa	Protein coding	CCDS16721	Q52KC5 Q9CQP3	TSL:1	GENCODE basic APPRIS P1
Chchd5-202	ENSMUST00000137881.1	923	No protein	Retained intron	-	-	TSL:1	
Chchd5-203	ENSMUST00000149118.1	793	No protein	lncRNA	-	-	TSL:2	

Genomic location distribution



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

Tel: 025-5864 1534

