

Dhrs7c Cas9-KO Strategy

Designer: Shilei Zhu



Project Name

Dhrs7c

Project type

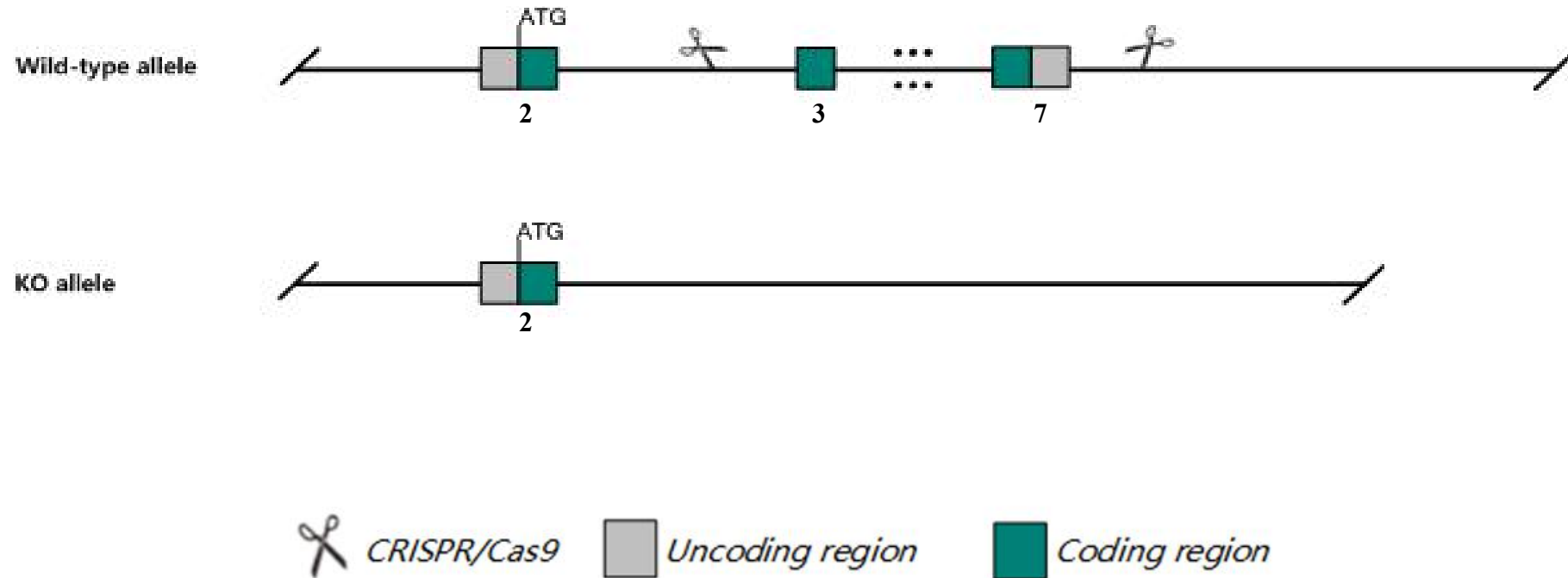
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Dhrs7c* gene. The schematic diagram is as follows:



The *Dhrs7c* gene has 5 transcripts. According to the structure of *Dhrs7c* gene, exon3-exon7 of *Dhrs7c-205* (ENSMUST00000168612.7) transcript is recommended as the knockout region. The region contains 782bp coding sequence. Knock out the region will result in disruption of protein function.

In this project we use CRISPR/Cas9 technology to modify *Dhrs7c* gene. The brief process is as follows: CRISPR/Cas9 system

The *Dhrs7c* gene is located on the Chr11. 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.

Dhrs7c dehydrogenase/reductase (SDR family) member 7C [Mus musculus (house mouse)]

Gene ID: 68460, updated on 31-Jan-2019

Summary



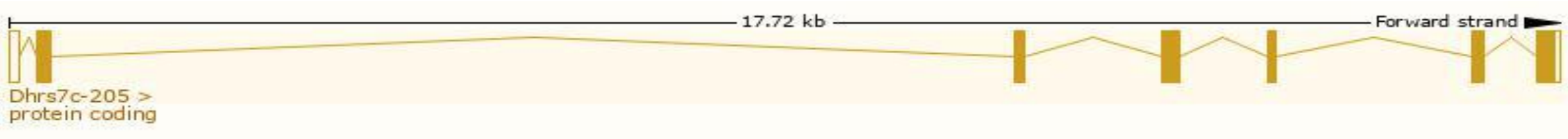
Official Symbol	Dhrs7c provided by MGI
Official Full Name	dehydrogenase/reductase (SDR family) member 7C provided by MGI
Primary source	MGI:MGI:1915710
See related	Ensembl:ENSMUSG00000033044
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	1110001P11Rik, AI120487, SRP-35
Expression	Biased expression in heart adult (RPKM 73.2) and mammary gland adult (RPKM 9.8) See more
Orthologs	human all

Transcript information Ensembl

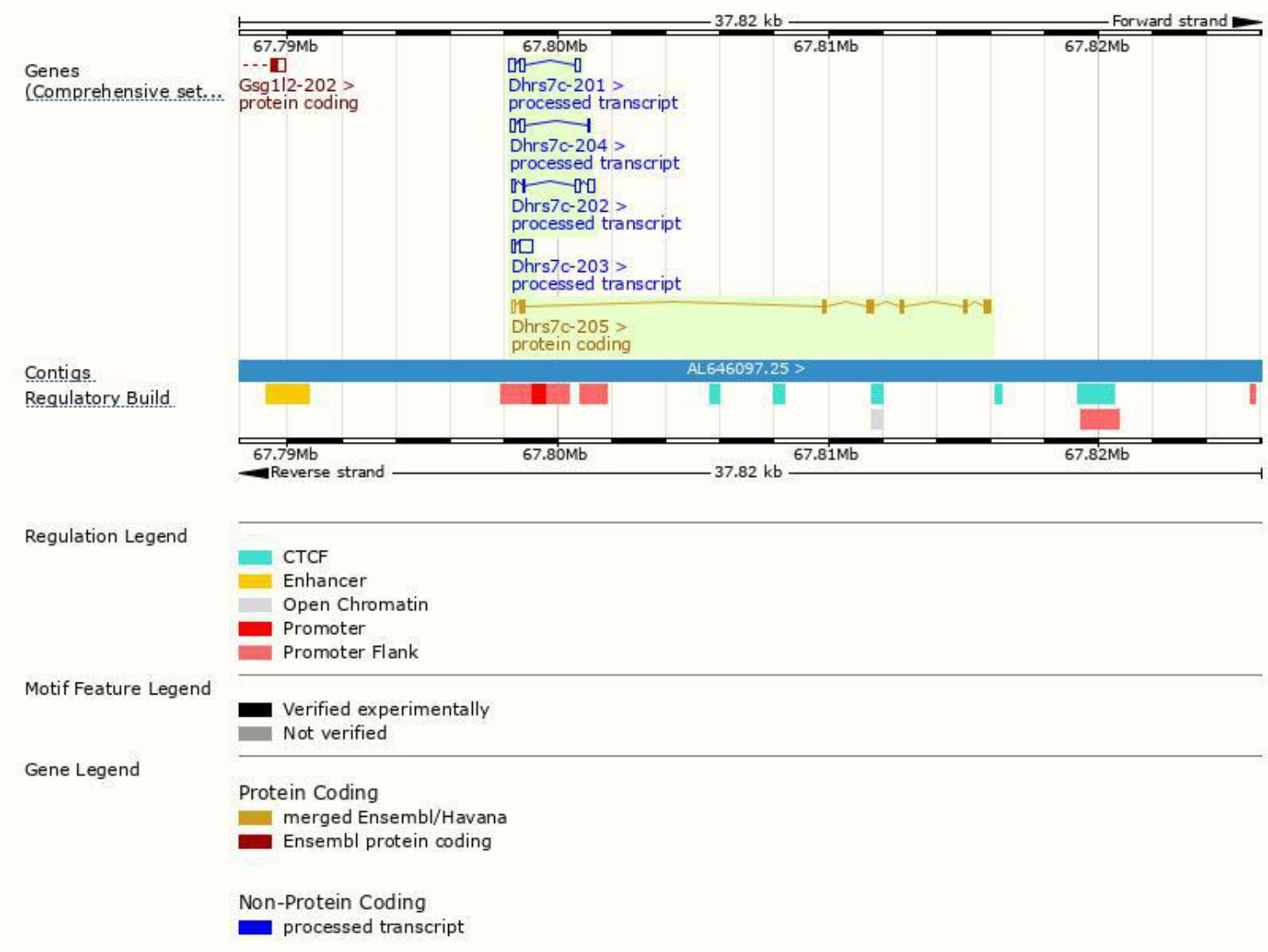
The gene has 5 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Dhrs7c-205	ENSMUST00000168612.7	1108	311aa	Protein coding	CCDS48822	Q8CHS7	TSL:5 GENCODE basic APPRIS P1
Dhrs7c-202	ENSMUST00000135830.1	585	No protein	Processed transcript	-	-	TSL:1
Dhrs7c-203	ENSMUST00000142686.1	574	No protein	Processed transcript	-	-	TSL:2
Dhrs7c-201	ENSMUST00000123862.7	549	No protein	Processed transcript	-	-	TSL:3
Dhrs7c-204	ENSMUST00000149722.5	342	No protein	Processed transcript	-	-	TSL:2

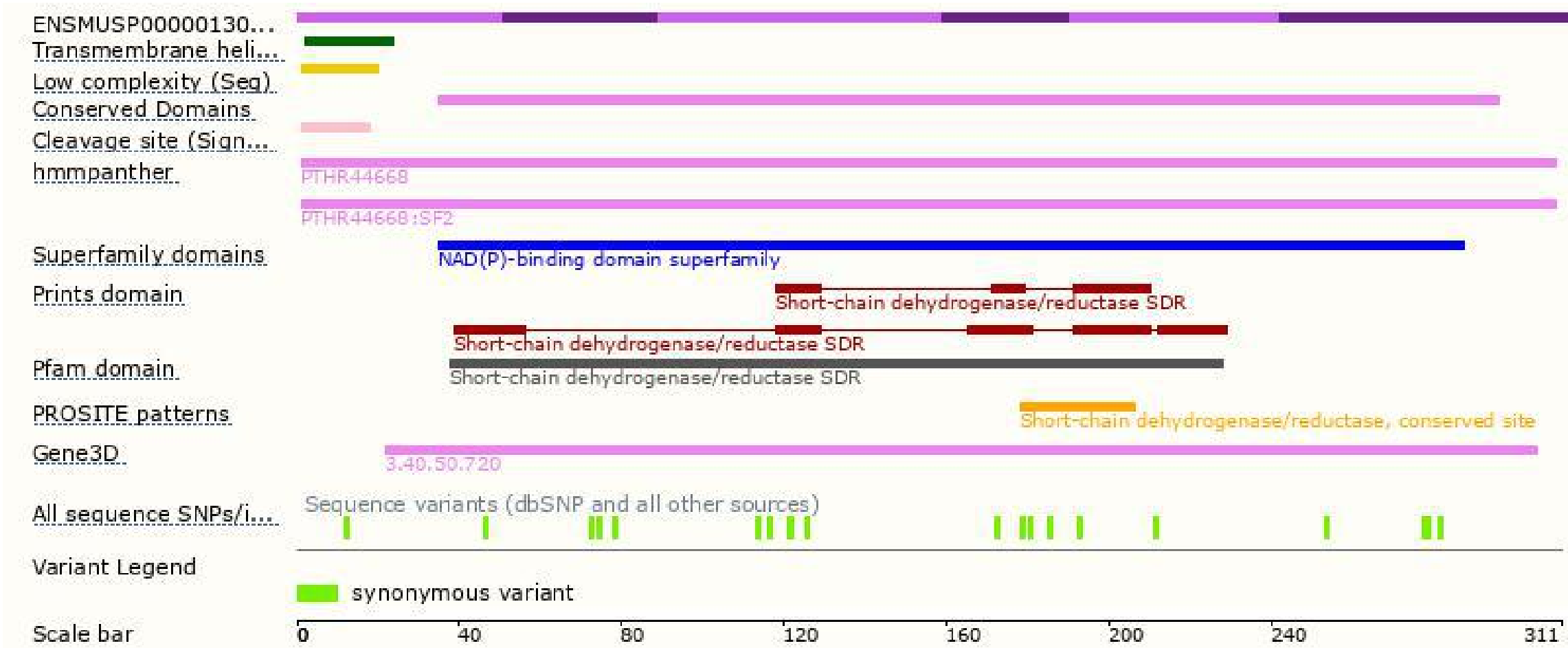
The strategy is based on the design of *Dhrs7c-205* transcript,The transcription is shown below



Genomic location distribution



Protein domain



If you have any questions, you are welcome to inquire.
Tel: 400-9660890

