

Gid8 Cas9-KO Strategy

Designer: Xiaojing Li

Reviewer: Jia Yu

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Project Overview



Project Name

Gid8

Project type

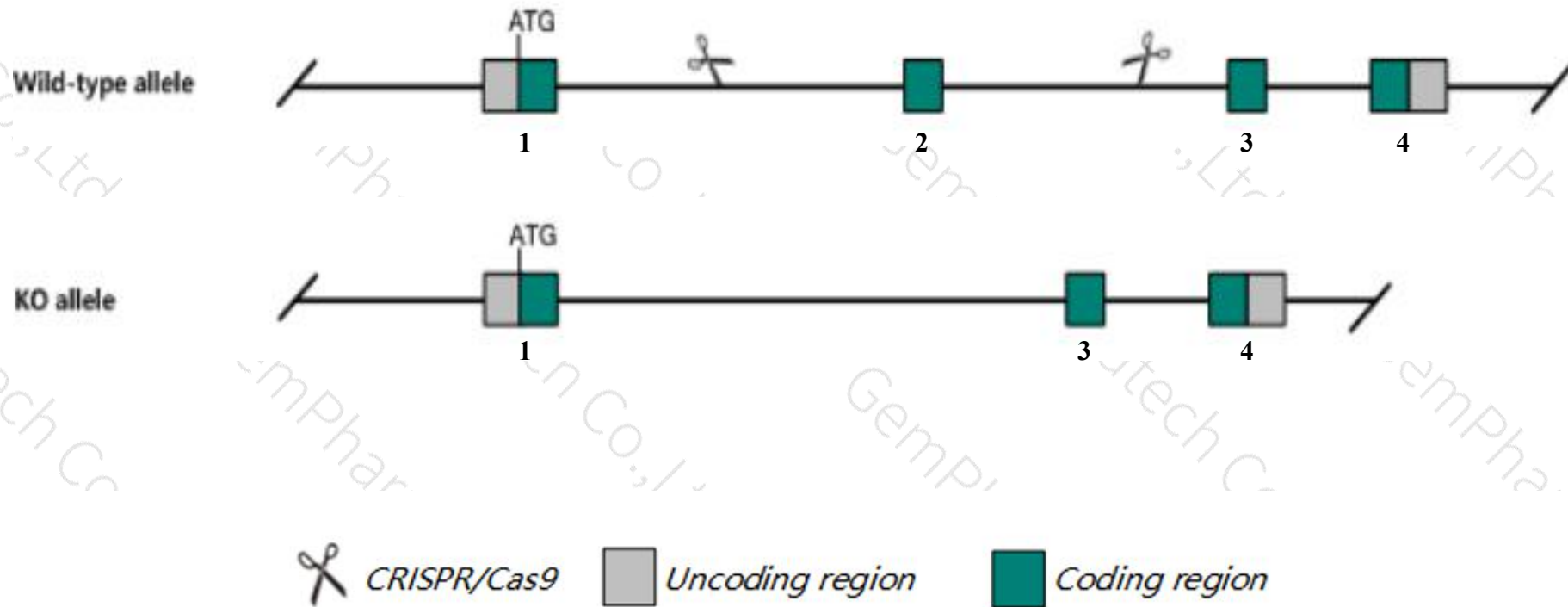
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Gid8* gene. The schematic diagram is as follows:



- The *Gid8* gene has 3 transcripts. According to the structure of *Gid8* gene, exon2 of *Gid8-202* (ENSMUST00000078687.5) transcript is recommended as the knockout region. The region contains 197bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Gid8* gene. The brief process is as follows: CRISPR/Cas9 system v

- The *Gid8* 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.
- The knockout region of this strategy is about 4.0kb away from the 5-terminal of *Dido1* gene, which may affect its 5-terminal regulation.
- 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)

Gid8 GID complex subunit 8 [Mus musculus (house mouse)]

Gene ID: 76425, updated on 13-Mar-2020

Summary



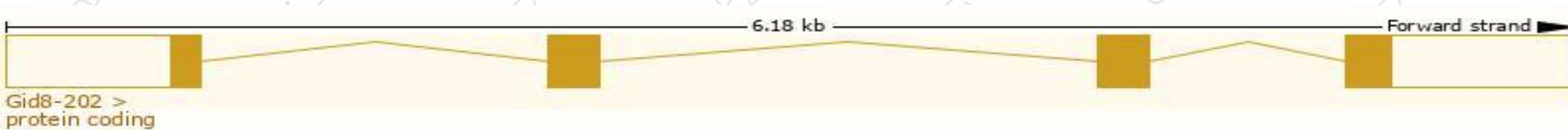
Official Symbol	Gid8 provided by MGI
Official Full Name	GID complex subunit 8 provided by MGI
Primary source	MGI:MGI:1923675
See related	Ensembl:ENSMUSG00000027573
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2310003C23Rik, 4833420G11Rik, AI451474, Twa1
Expression	Ubiquitous expression in liver E14 (RPKM 23.4), liver E14.5 (RPKM 22.0) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

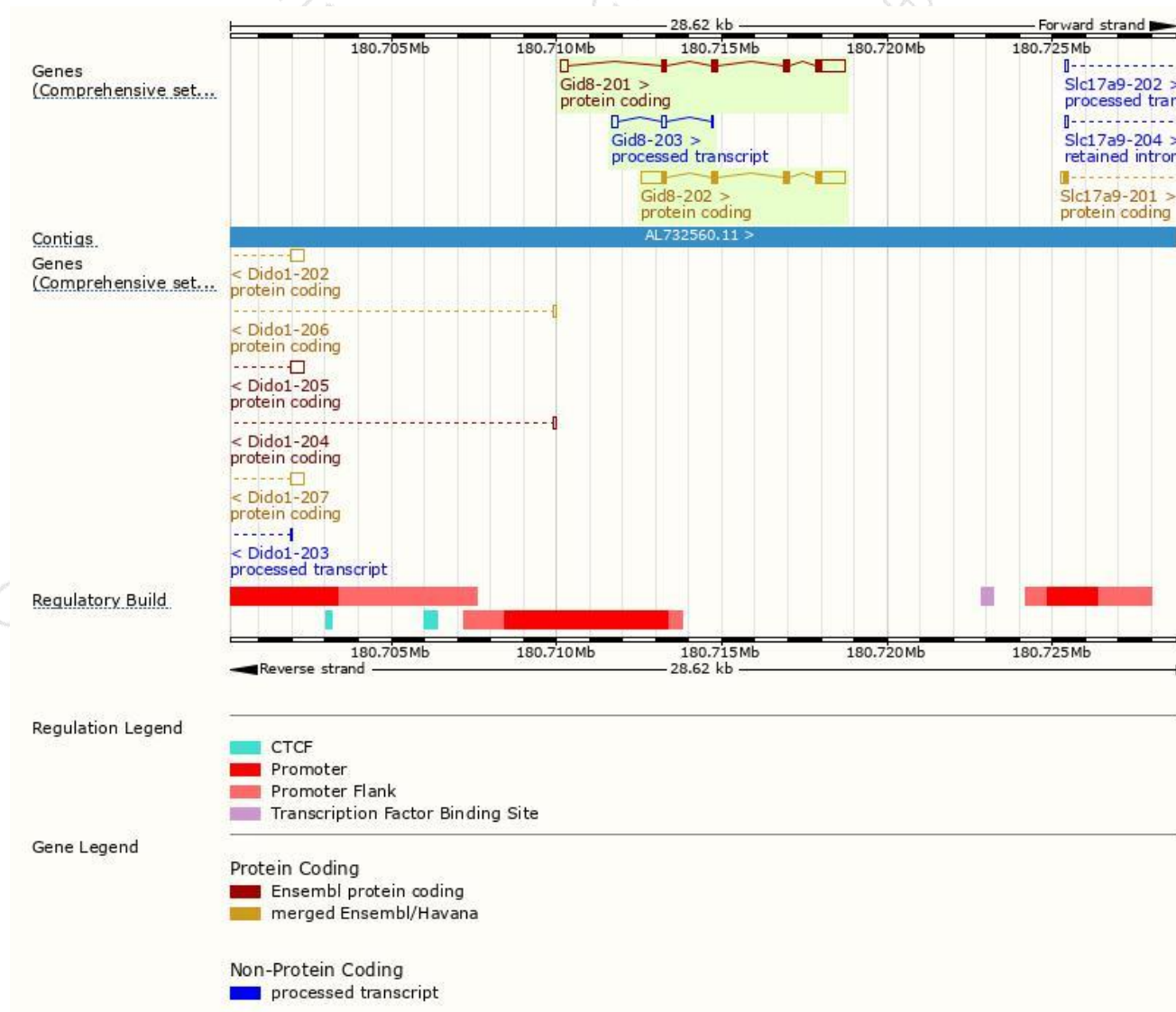
The gene has 3 transcripts, all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Gid8-202	ENSMUST00000078687.5	2063	228aa	Protein coding	CCDS17185	Q9D7M1	TSL:1 GENCODE basic APPRIS P1
Gid8-201	ENSMUST00000029090.8	1655	228aa	Protein coding	CCDS17185	Q9D7M1	TSL:1 GENCODE basic APPRIS P1
Gid8-203	ENSMUST00000150067.1	344	No protein	Processed transcript	-	-	TSL:2

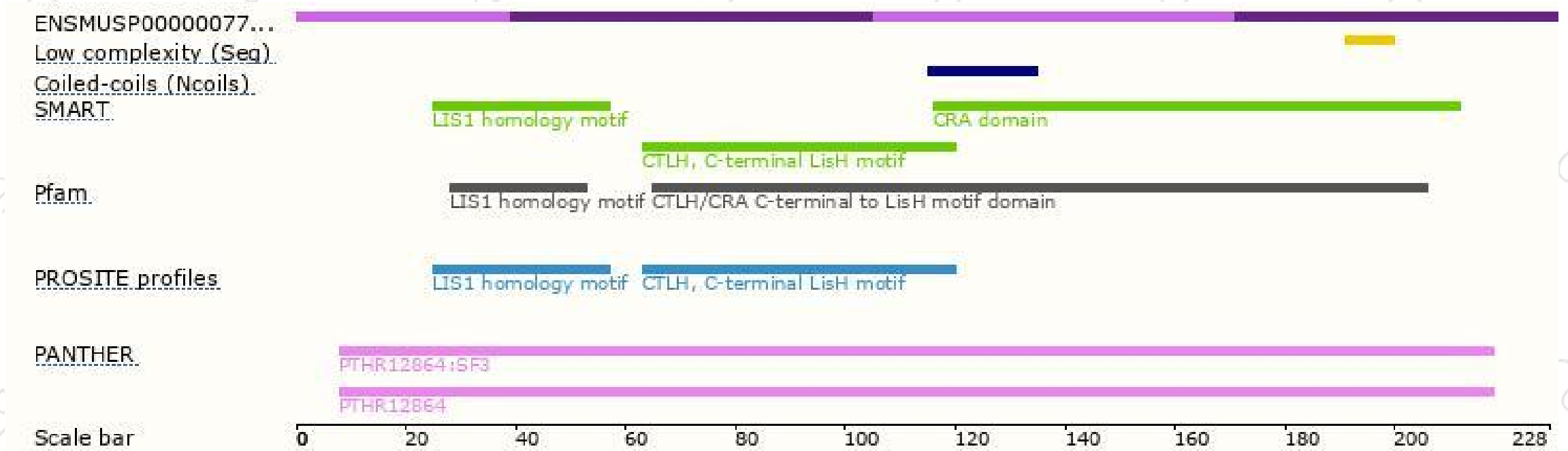
The strategy is based on the design of *Gid8-202* transcript, the transcription is shown below:



Genomic location distribution



Protein domain



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

Tel: 400-9660890

