

***Gosr1* Cas9-CKO Strategy**

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Design Date: 2020-2-16

Project Overview

Project Name

Gosr1

Project type

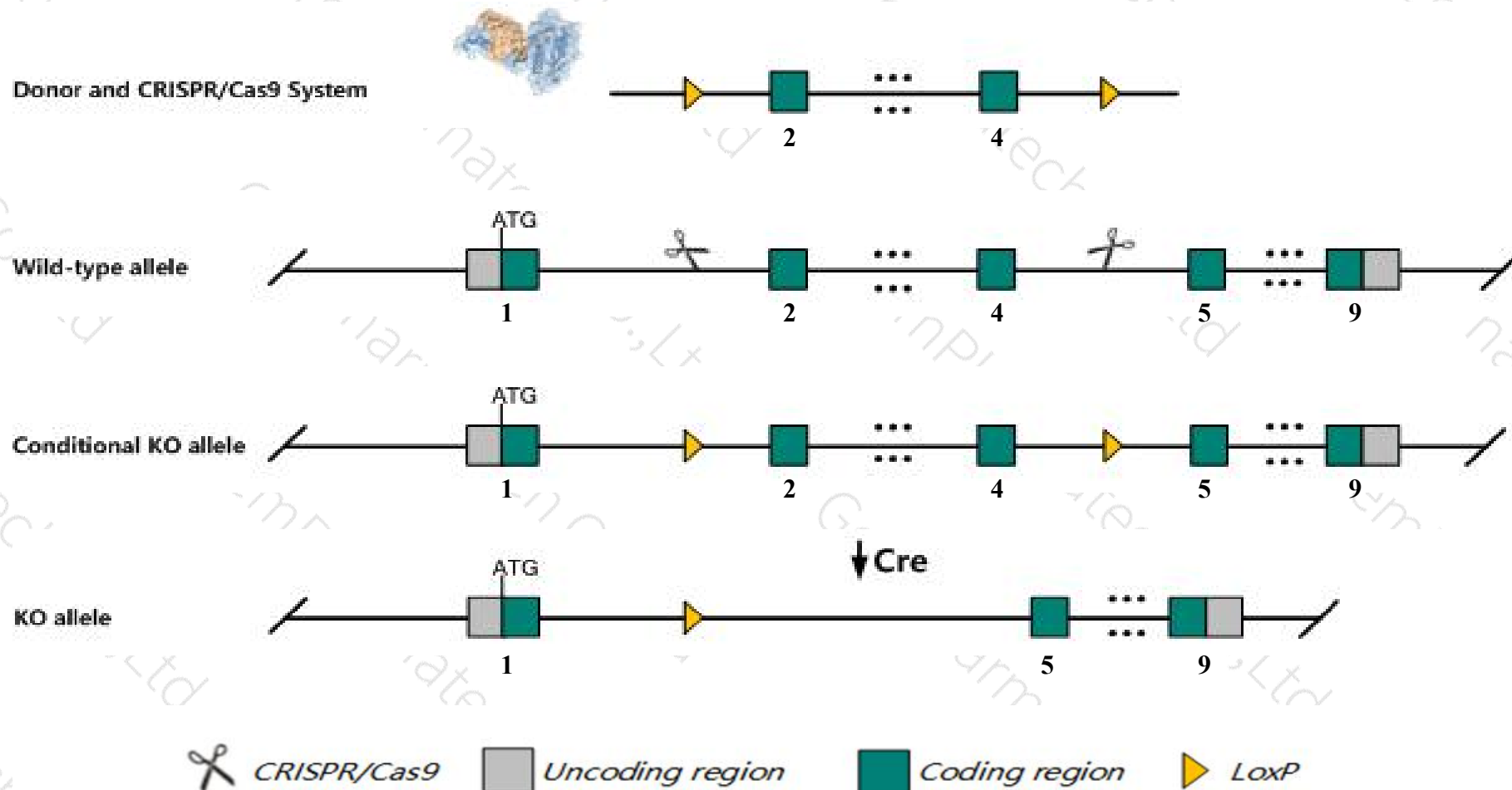
Cas9-CKO

Strain background

C57BL/6JGpt

Conditional Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Gosr1* gene. The schematic diagram is as follows:



- The *Gosr1* gene has 2 transcripts. According to the structure of *Gosr1* gene, exon2-exon4 of *Gosr1*-201 (ENSMUST00000010536.8) transcript is recommended as the knockout region. The region contains 317bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Gosr1* gene. The brief process is as follows: CRISPR/Cas9 system and Donor were microinjected into the fertilized eggs of C57BL/6JGpt 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/6JGpt mice.
- The flox mice will be knocked out after mating with mice expressing Cre recombinase, resulting in the loss of function of the target gene in specific tissues and cell types.

Notice

- The *Gosr1* 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 loxp insertion on gene transcription, RNA splicing and protein translation cannot be predicted at existing technological level.

Gene information (NCBI)

Gosr1 golgi SNAP receptor complex member 1 [*Mus musculus* (house mouse)]

Gene ID: 53334, updated on 10-Oct-2019

Summary



Official Symbol	Gosr1 provided by MGI
Official Full Name	golgi SNAP receptor complex member 1 provided by MGI
Primary source	MGI:MGI:1858260
See related	Ensembl:ENSMUSG00000010392
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	GS28; GOSRI; GOS-28; AI414660; AI426320; BB145494
Expression	Ubiquitous expression in kidney adult (RPKM 9.6), placenta adult (RPKM 9.5) and 28 other tissues See more
Orthologs	human all

Genomic context



Location: 11; 11 B5

Exon count: 9

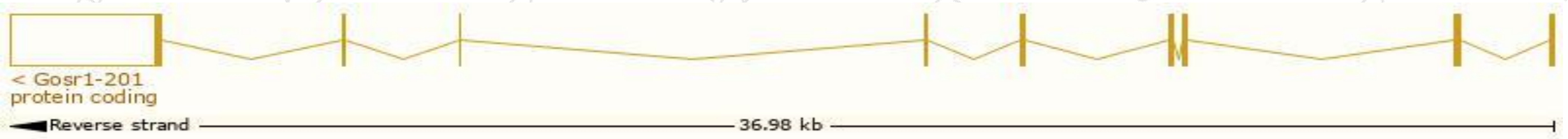
See Gosr1 in [Genome Data Viewer](#)

Transcript information (Ensembl)

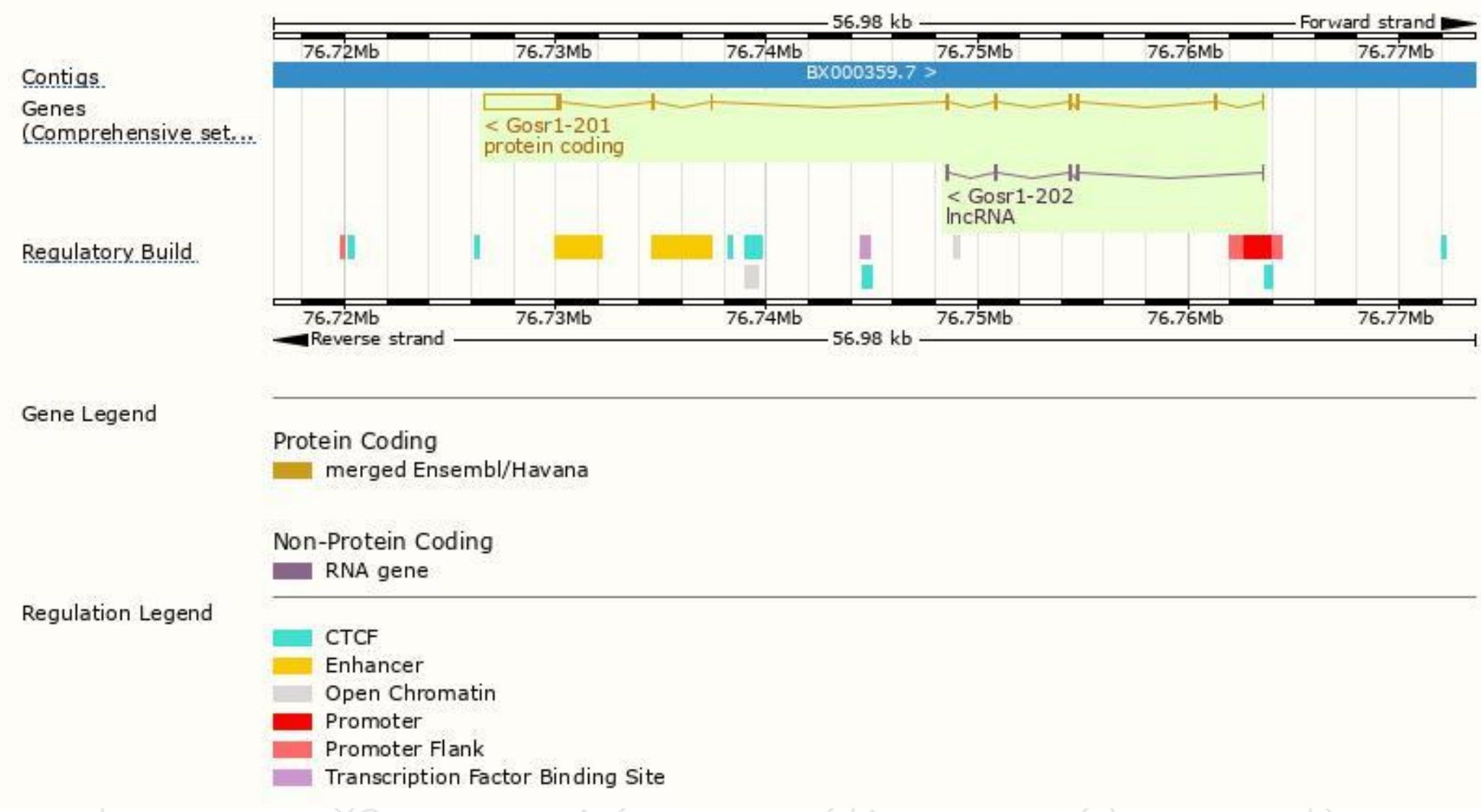
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Gosr1-201	ENSMUST00000010536.8	4289	250aa	Protein coding	CCDS25070	Q88630	TSL:1 GENCODE basic APPRIS P1
Gosr1-202	ENSMUST00000137767.1	411	No protein	lncRNA	-	-	TSL:3

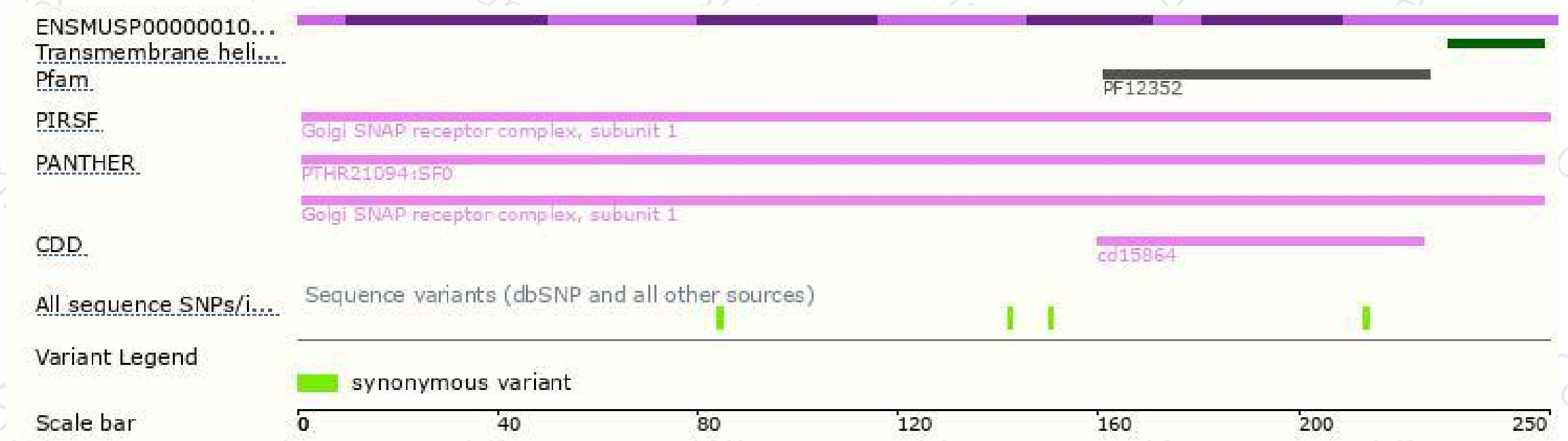
The strategy is based on the design of *Gosr1-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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