

Sall2 Cas9-KO Strategy

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Project Overview

Project Name

Sall2

Project type

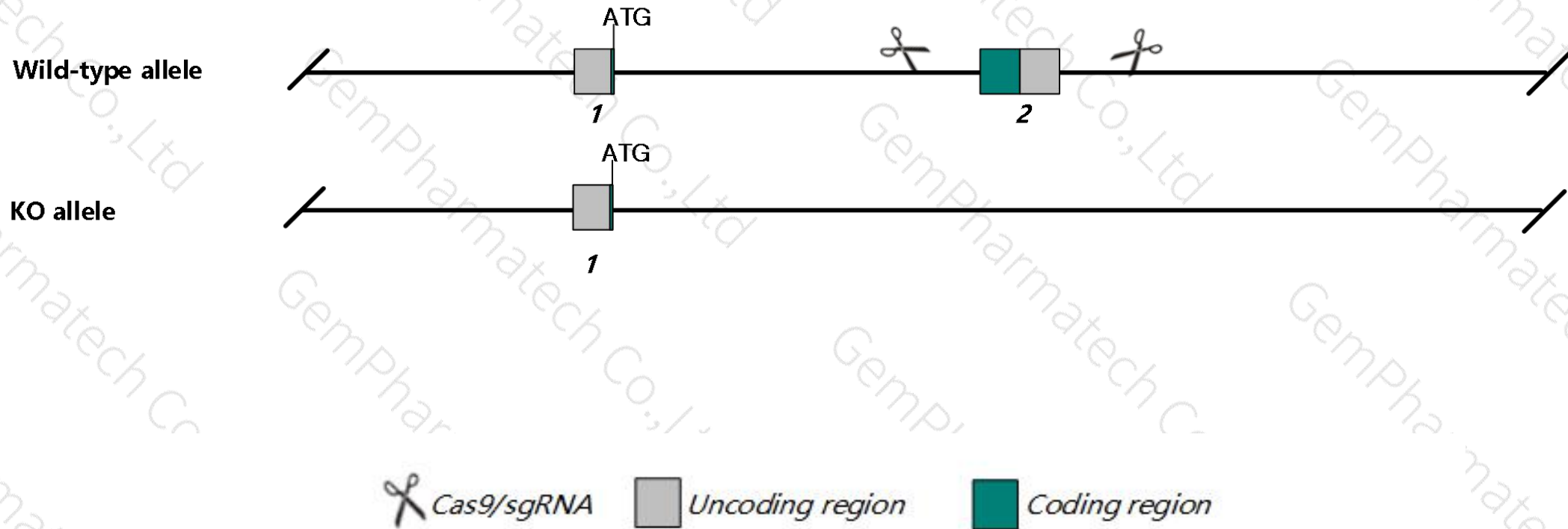
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Sall2* gene. The schematic diagram is as follows:



- The *Sall2* gene has 2 transcripts. According to the structure of *Sall2* gene, exon2 of *Sall2-201* (ENSMUST00000058326.5) transcript is recommended as the knockout region. The region contains most of the coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Sall2* gene. The brief process is as follows: CRISPR/Cas9 system v

- According to the existing MGI data, Homozygous mutation of this gene results in no apparent abnormal phenotypes.
- The *Sall2* gene is located on the Chr14. 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)

Sall2 spalt like transcription factor 2 [*Mus musculus* (house mouse)]

Gene ID: 50524, updated on 13-Mar-2020

Summary

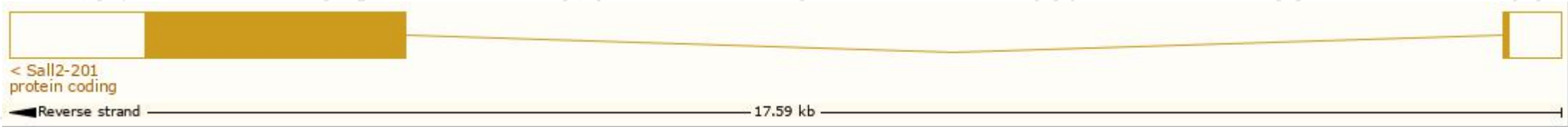
Official Symbol	Sall2 provided by MGI
Official Full Name	spalt like transcription factor 2 provided by MGI
Primary source	MGI:MGI:1354373
See related	Ensembl:ENSMUSG00000049532
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Sal-2; Msal-2; AI225809; AW559097; mKIAA0360; p150(Sal2)
Expression	Broad expression in CNS E11.5 (RPKM 18.6), whole brain E14.5 (RPKM 18.0) and 18 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

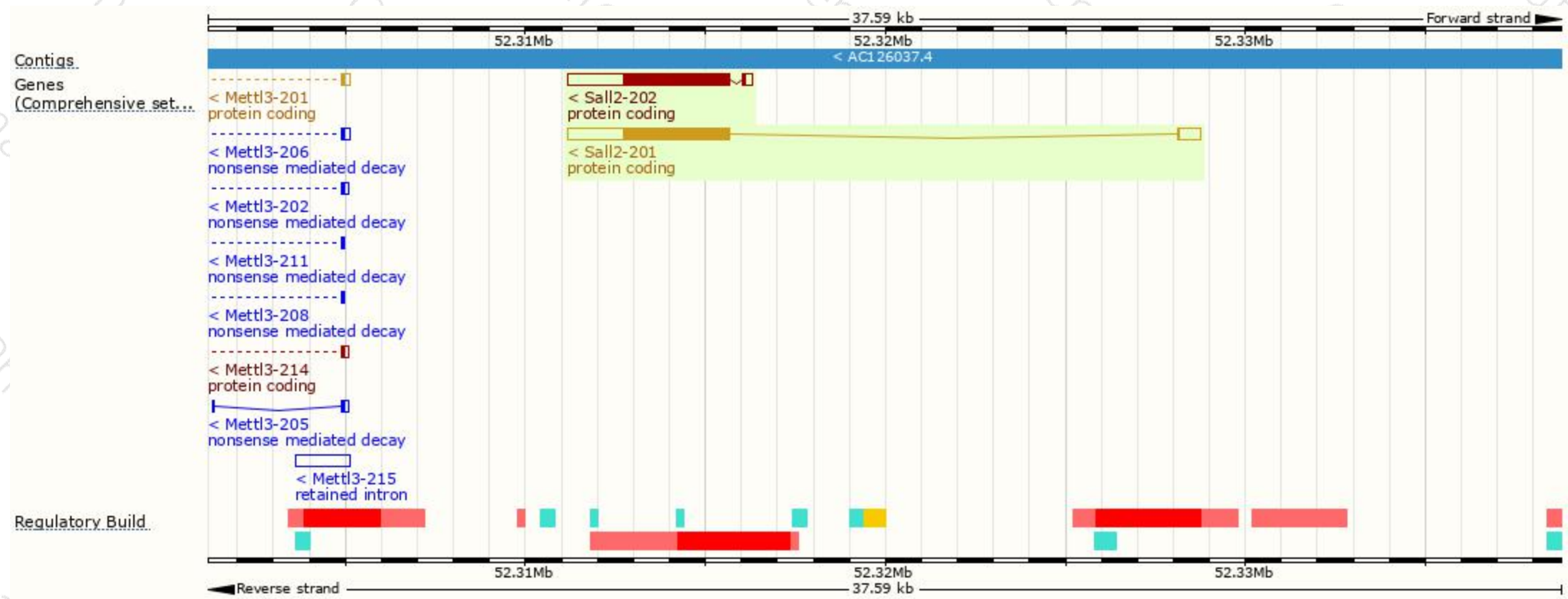
The gene has 2 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Sall2-201	ENSMUST00000058326.5	5147	1004aa	Protein coding	CCDS27054	Q9QX96	TSL:1 GENCODE basic APPRIS P2
Sall2-202	ENSMUST00000135523.4	4773	1002aa	Protein coding	-	A0A2I3BQV4	TSL:1 GENCODE basic APPRIS ALT2

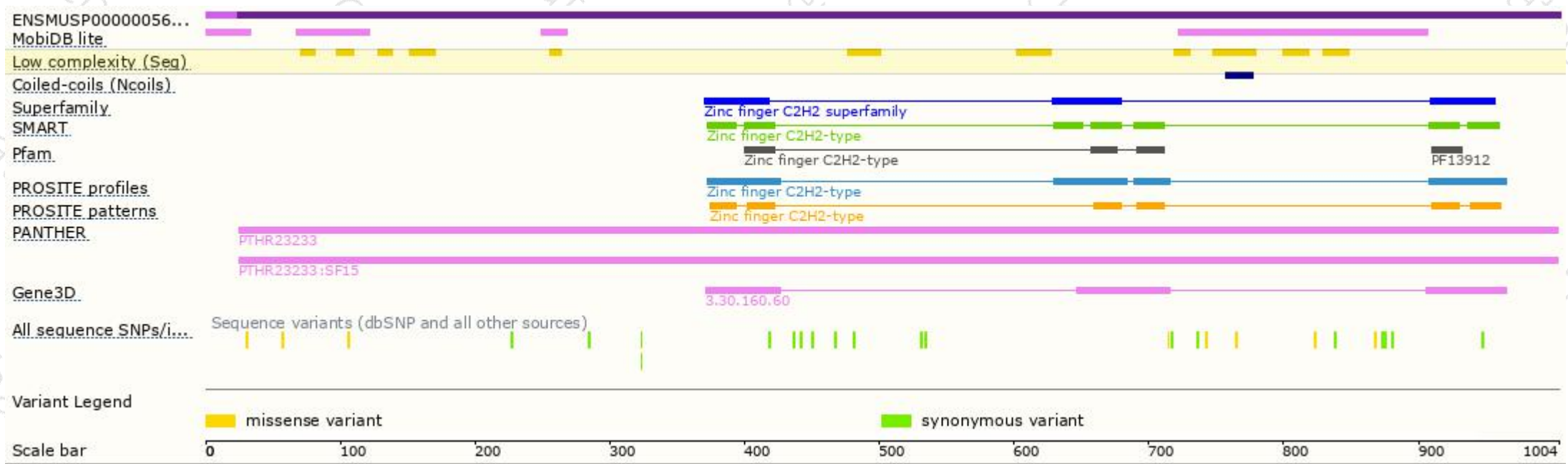
The strategy is based on the design of *Sall2-201* transcript,The transcription is shown below



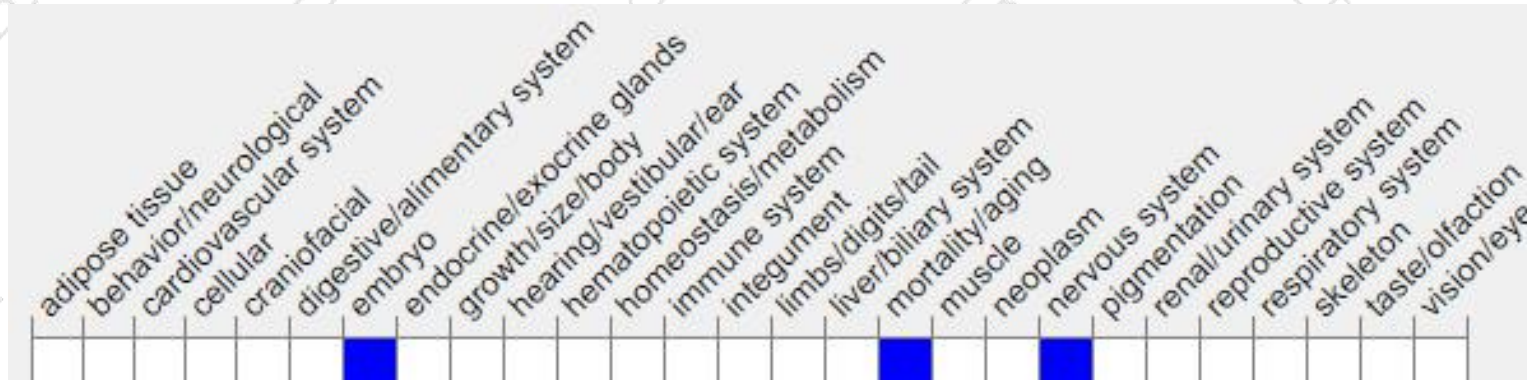
Genomic location distribution



Protein domain



Mouse phenotype description(MGI)



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

According to the existing MGI data, Homozygous mutation of this gene results in no apparent abnormal phenotypes.

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

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