

Zkscan8 Cas9-KO Strategy

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Project Overview

Project Name

Zkscan8

Project type

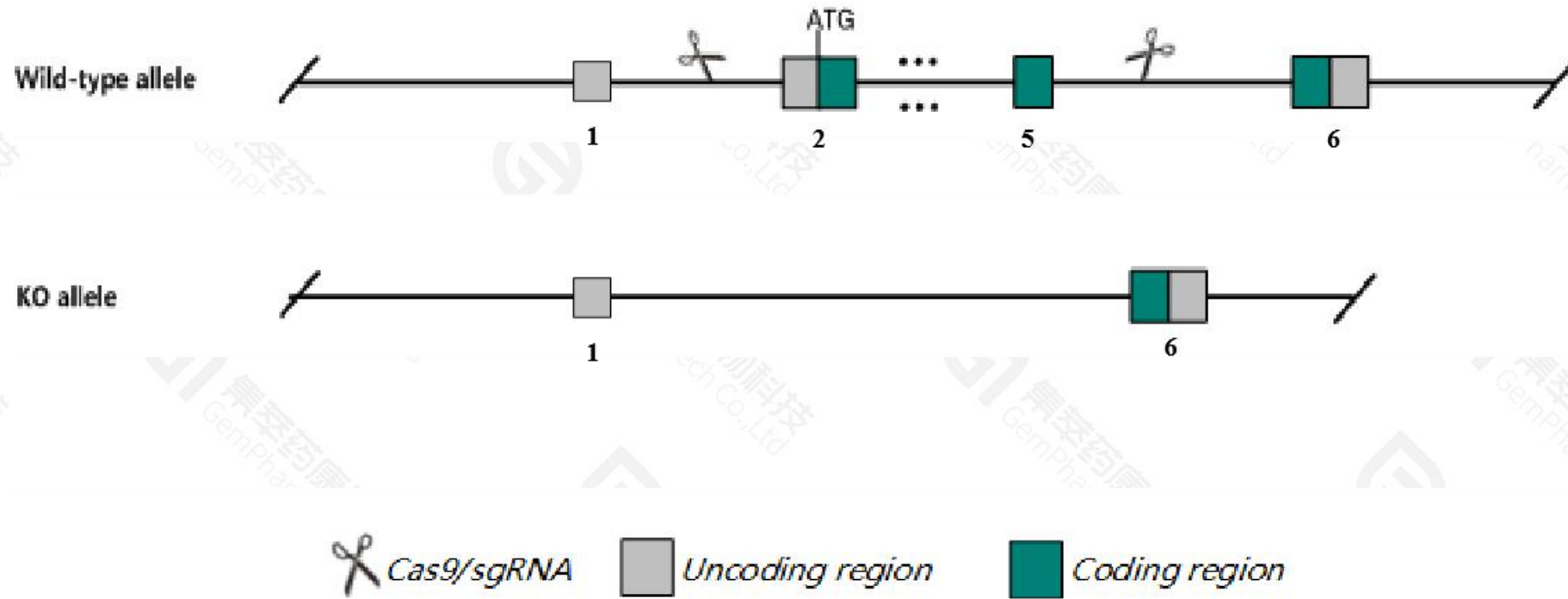
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Zkscan8* gene. The schematic diagram is as follows:



- The *Zkscan8* gene has 4 transcripts. According to the structure of *Zkscan8* gene, exon2-exon5 of *Zkscan8*-201(ENSMUST00000045228.11) transcript is recommended as the knockout region. The region contains start codon ATG. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Zkscan8* gene. The brief process is as follows: CRISPR/Cas9 system 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 KO region contains start codon ATG, new unknown protein may be formed.
- The *Zkscan8* gene is located on the Chr13. 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)

Zkscan8 zinc finger with KRAB and SCAN domains 8 [*Mus musculus* (house mouse)]

[Download Datasets](#)

Gene ID: 93681, updated on 13-Dec-2020

Summary



Official Symbol Zkscan8 provided by [MGI](#)

Official Full Name zinc finger with KRAB and SCAN domains 8 provided by [MGI](#)

Primary source [MGI:MGI:1913815](#)

See related [Ensembl:ENSMUSG00000063894](#)

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 LD5-; LD5-1; Zfp19; Zfp192; 2510038J07Rik; D430019P06Rik

Expression Ubiquitous expression in limb E14.5 (RPKM 5.0), whole brain E14.5 (RPKM 3.6) and 27 other tissues [See more](#)

Orthologs [human](#) [all](#)

NEW

Try the new [Gene table](#)

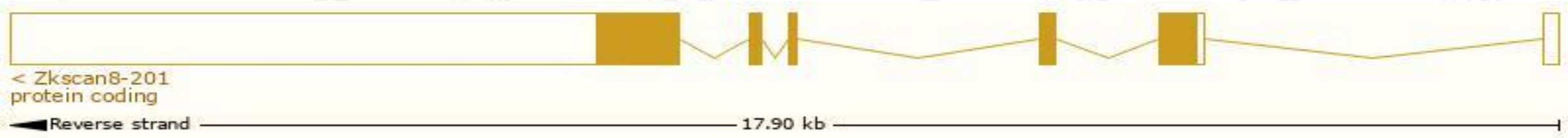
Try the new [Transcript table](#)

Transcript information (Ensembl)

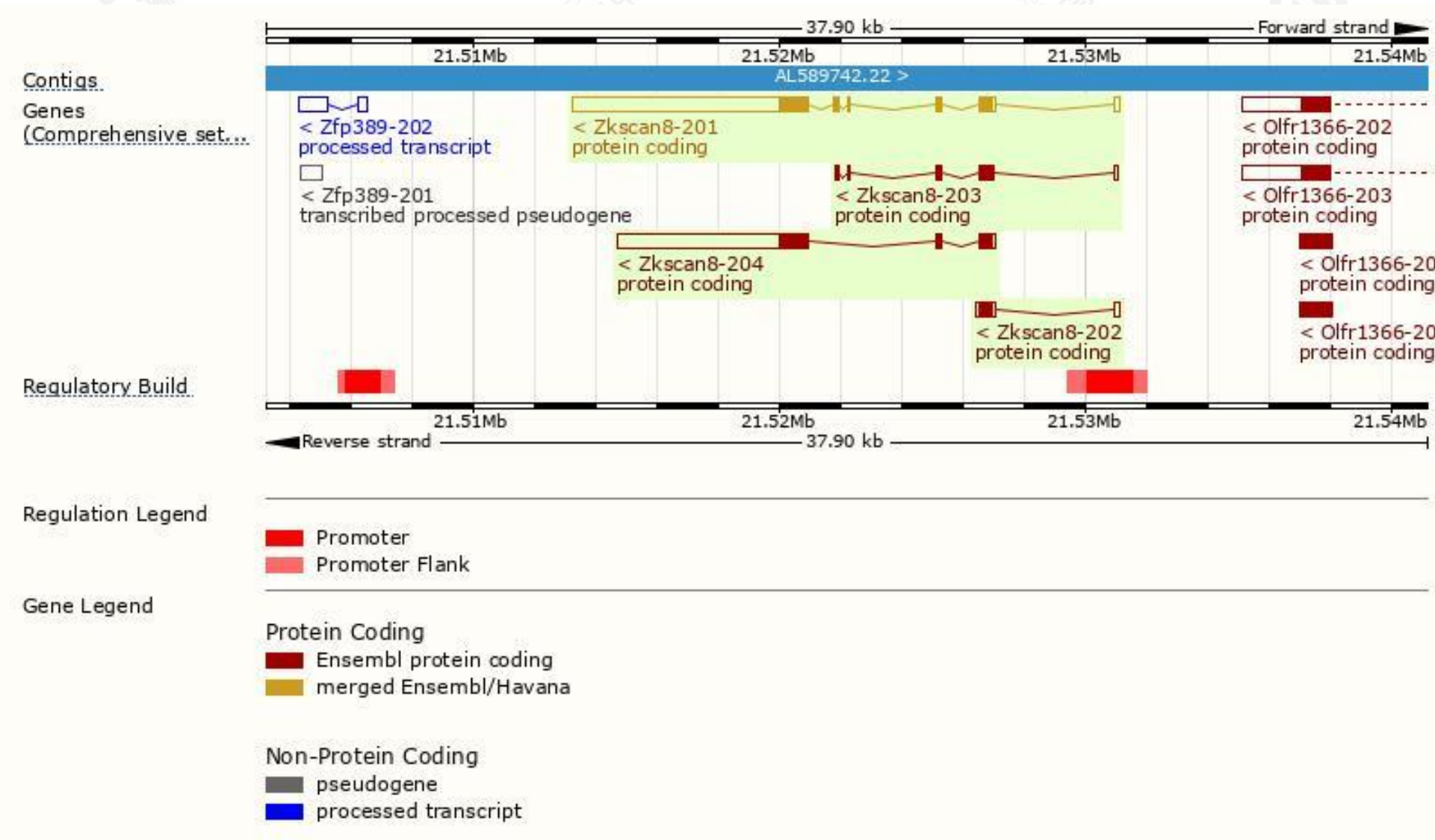
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zkscan8-201	ENSMUST00000045228.11	8805	588aa	Protein coding	CCDS26278	Q8BSL0	TSL:1 GENCODE basic APPRIS P2
Zkscan8-202	ENSMUST00000110481.2	728	148aa	Protein coding	CCDS56871	Q78WV9	TSL:2 GENCODE basic
Zkscan8-204	ENSMUST00000224362.1	6954	516aa	Protein coding	-	A0A286YCX3	GENCODE basic APPRIS ALT2
Zkscan8-203	ENSMUST00000156674.2	928	253aa	Protein coding	-	D3Z716	CDS 3' incomplete TSL:5

The strategy is based on the design of *Zkscan8-201* 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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