

Zfp526 Cas9-KO Strategy

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Overview

Target Gene Name

- *Zfp526*

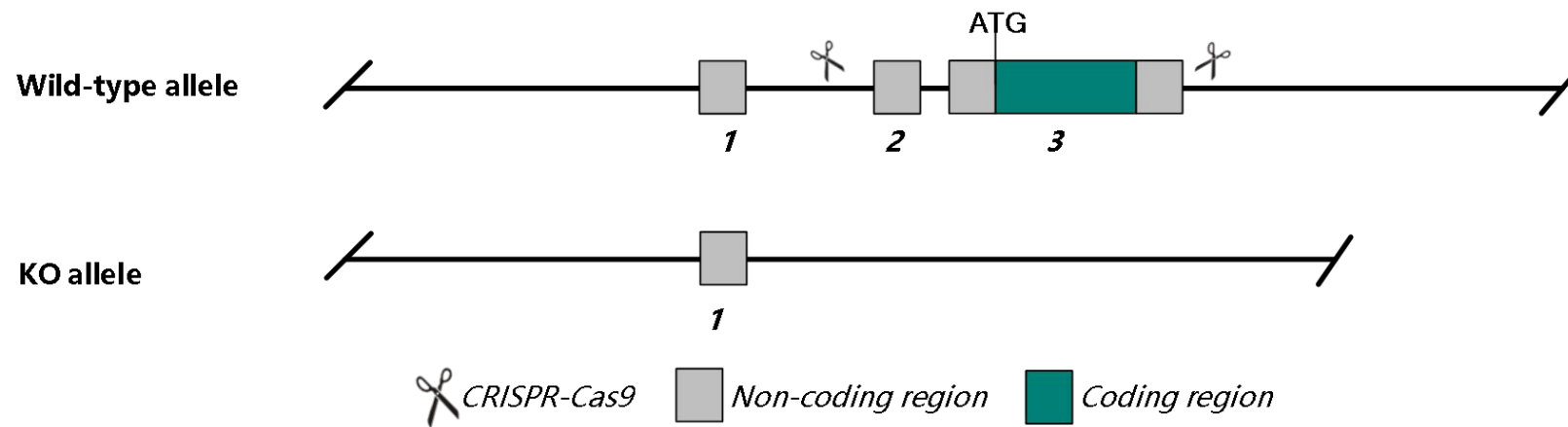
Project Type

- Cas9-KO

Genetic Background

- C57BL/6JGpt

Strain Strategy



Schematic representation of CRISPR-Cas9 engineering used to edit the *Zfp526* gene.

Technical Information

- The *Zfp526* gene has 1 transcript. According to the structure of *Zfp526* gene, exon 2-3 of *Zfp526*-201 (ENSMUST00000055604.6) is recommended as the knockout region. The region contains all coding sequence and part of 5'UTR. Knocking out the region may result in disruption of gene function.
- In this project we use CRISPR-Cas9 technology to modify *Zfp526* gene. The brief process is as follows: gRNAs were transcribed in vitro. Cas9 and gRNAs 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 on-target amplicon sequencing. A stable F1-generation mouse strain was obtained by mating positive F0-generation mice with C57BL/6JGpt mice and confirmation of the desired mutant allele was carried out by PCR and on-target amplicon sequencing.

Gene Information

Zfp526 zinc finger protein 526 [*Mus musculus* (house mouse)]

Gene ID: 210172, updated on 5-Mar-2024

[Download Datasets](#)

Summary

Official Symbol	Zfp526 provided by MGI
Official Full Name	zinc finger protein 526 provided by MGI
Primary source	MGI:MGI:2445181
See related	Ensembl:ENSMUSG00000046541 AllianceGenome:MGI:2445181
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	Znf526; D030024H03Rik
Summary	Predicted to enable DNA-binding transcription factor activity, RNA polymerase II-specific and RNA polymerase II cis-regulatory region sequence-specific DNA binding activity. Predicted to be involved in regulation of transcription by RNA polymerase II. Predicted to be active in nucleus. Is expressed in genitourinary system. Orthologous to human ZNF526 (zinc finger protein 526). [provided by Alliance of Genome Resources, Apr 2022]
Expression	Ubiquitous expression in testis adult (RPKM 12.7), thymus adult (RPKM 11.5) and 28 other tissues See more
Orthologs	human all
NEW	Try the new Gene table Try the new Transcript table

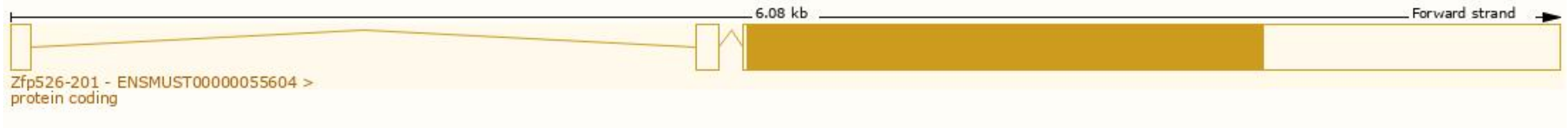
<https://www.ncbi.nlm.nih.gov/gene/210172>

Transcript Information

The gene has 1 transcript, the transcript are shown below:

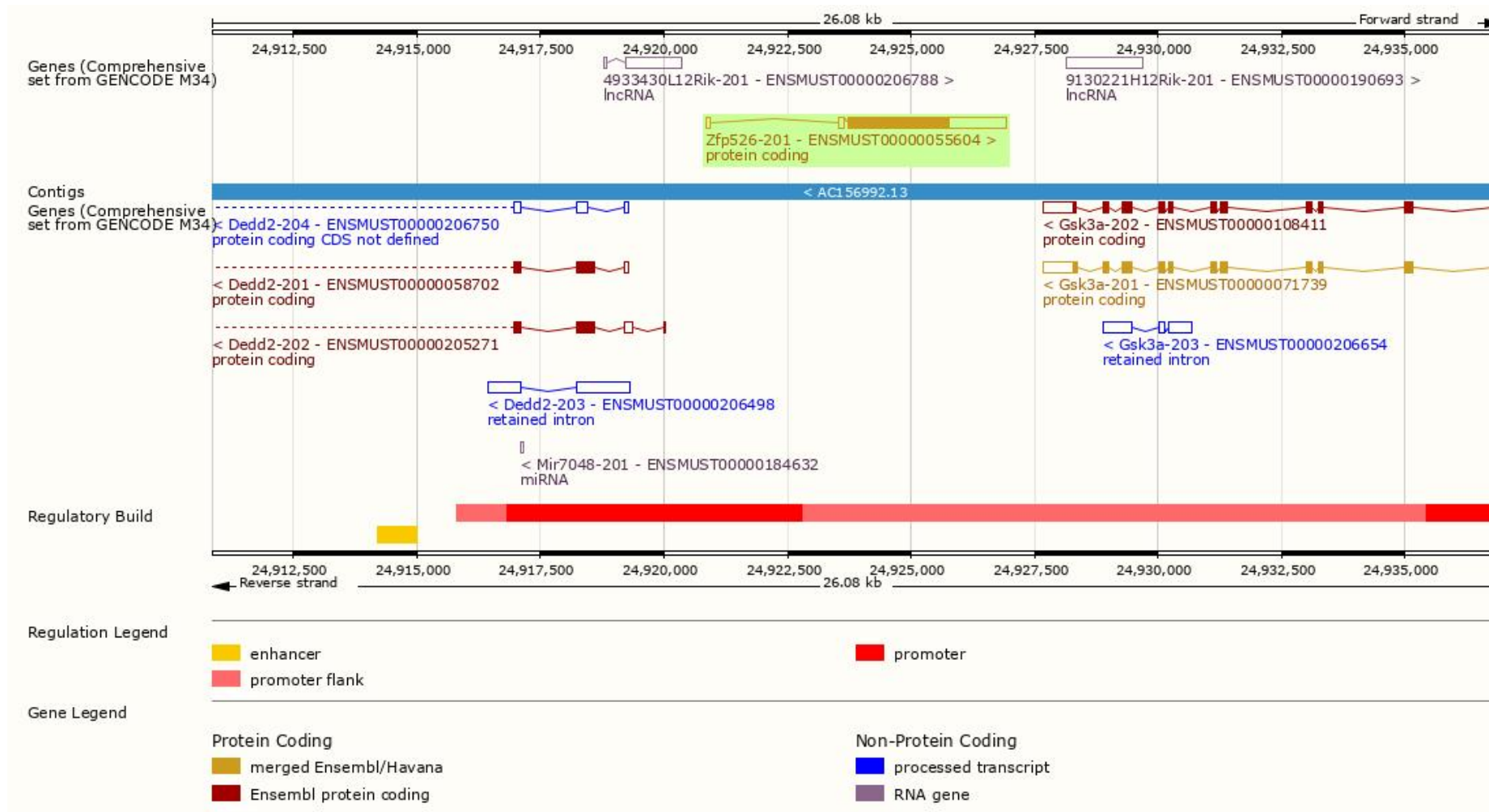
Show/hide columns (1 hidden)							Filter			
Transcript ID	Name	bp	Protein	Biotype	CCDS	UniProt Match	Flags			
ENSMUST00000055604.6	Zfp526-201	3380	675aa	Protein coding	CCDS20975	Q8BI66	Ensembl Canonical	GENCODE basic	APPRIS P1	TSL:1

The strategy is based on the design of *Zfp526-201* transcript, the transcription is shown below:

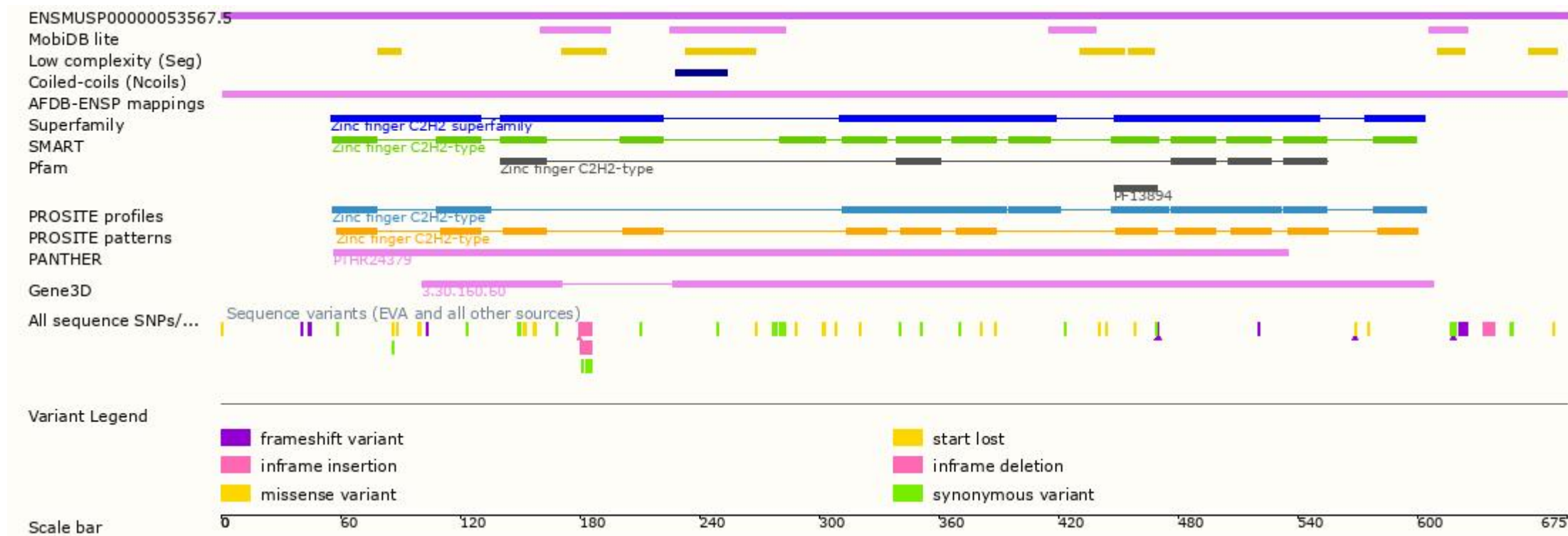


Source: <http://asia.ensembl.org/>

Genomic Information



Protein Information



Important Information

- The knockout region is about 3 kb away from the 5' of *Dedd2*, the risk is unknown.
- The knockout region is about 0.5 kb away from the 3' of *Gsk3a* , the risk is unknown.
- The knockout region is about 1 kb away from the 5' of *9130221H12Rik* and 2.5kb away from the 3' of *4933430L12Rik*, the risk is unknown.
- *Zfp526* is located on Chr 7. If the knockout mice are crossed with other mouse strains to obtain double homozygous mutant offspring, please avoid the situation that the second gene is on the same chromosome.
- This strategy is designed based on genetic information in existing databases. Due to the complexity of biological processes, all risks of the mutation on gene transcription, RNA splicing and protein translation cannot be predicted at the existing technology level.