

Ankib1 Cas9-KO Strategy

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Reviewer:

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Project Overview

Project Name

Ankib1

Project type

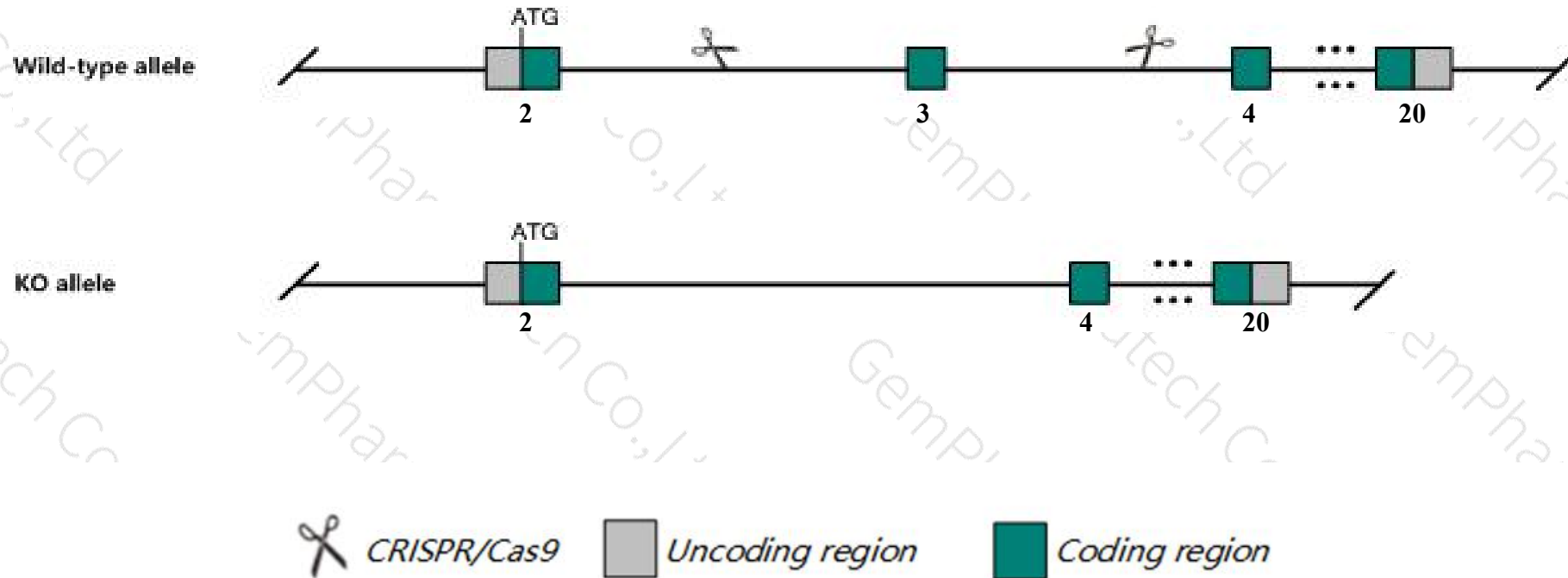
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Ankib1* gene. The schematic diagram is as follows:



- The *Ankib1* gene has 6 transcripts. According to the structure of *Ankib1* gene, exon3 of *Ankib1-201* (ENSMUST00000043551.10) transcript is recommended as the knockout region. The region contains 301bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Ankib1* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Ankib1* gene is located on the Chr5. 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)

Ankib1 ankyrin repeat and IBR domain containing 1 [Mus musculus (house mouse)]

Gene ID: 70797, updated on 19-Mar-2019

Summary



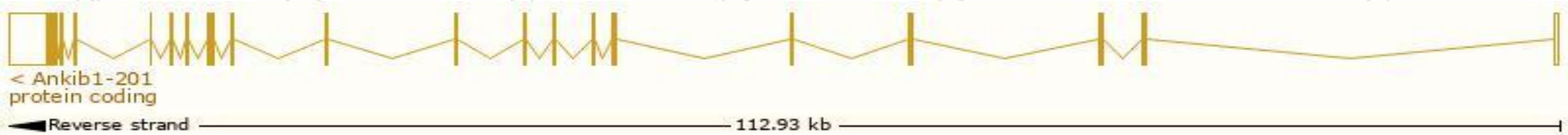
Official Symbol	Ankib1 provided by MGI
Official Full Name	ankyrin repeat and IBR domain containing 1 provided by MGI
Primary source	MGI:MGI:1918047
See related	Ensembl:ENSMUSG00000040351
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	2310061P20Rik, 4631416I11Rik, AW494740, C80642, mKIAA1386
Expression	Ubiquitous expression in kidney adult (RPKM 7.8), CNS E18 (RPKM 6.0) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

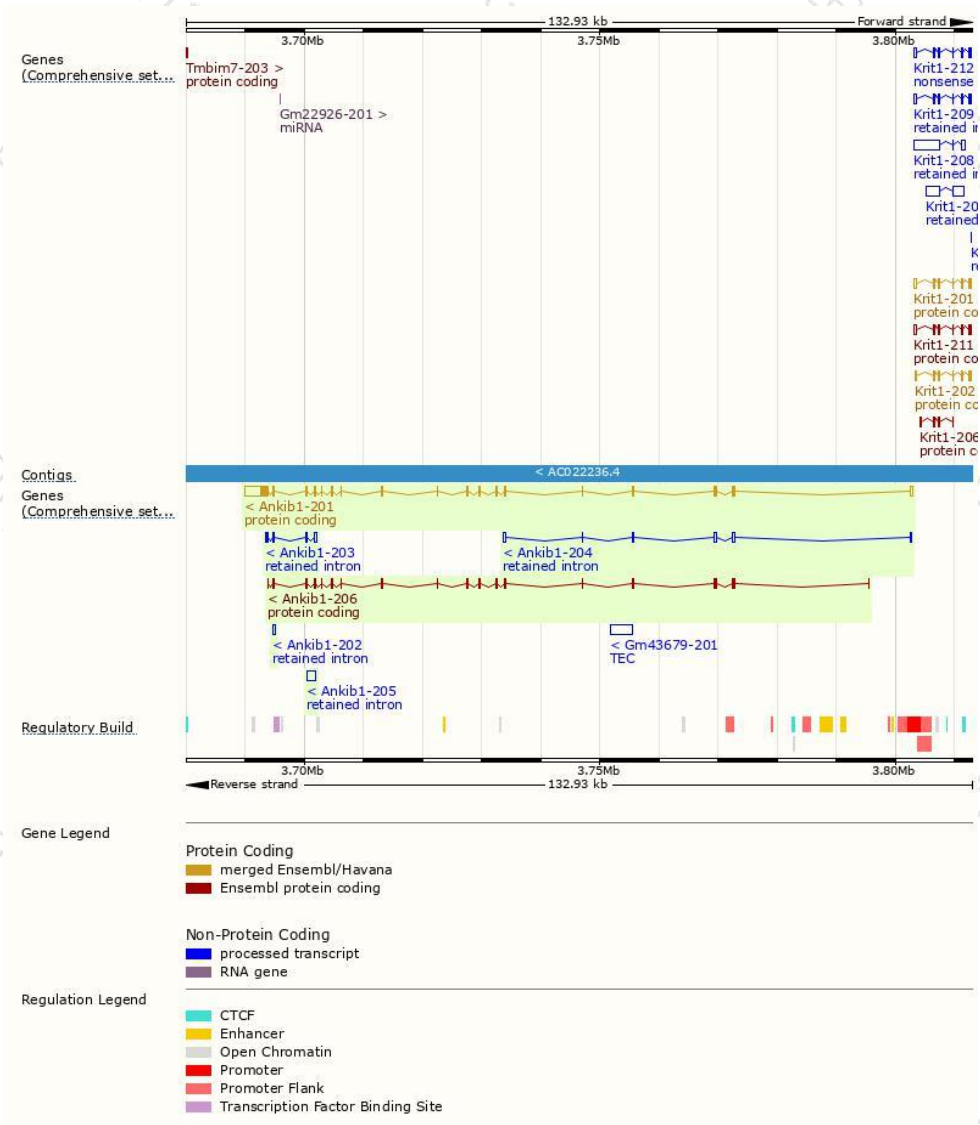
The gene has 6 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Ankib1-201	ENSMUST00000043551.10	6426	1085aa	Protein coding	CCDS51408	Q6ZPS6	TSL:1 GENCODE basic APPRIS P1
Ankib1-206	ENSMUST00000200335.1	2572	809aa	Protein coding	-	A0A0G2JEA0	CDS 3' incomplete TSL:1
Ankib1-204	ENSMUST00000199763.1	1569	No protein	Retained intron	-	-	TSL:5
Ankib1-205	ENSMUST00000200052.1	1319	No protein	Retained intron	-	-	TSL:NA
Ankib1-203	ENSMUST00000199043.1	639	No protein	Retained intron	-	-	TSL:3
Ankib1-202	ENSMUST00000198344.1	429	No protein	Retained intron	-	-	TSL:NA

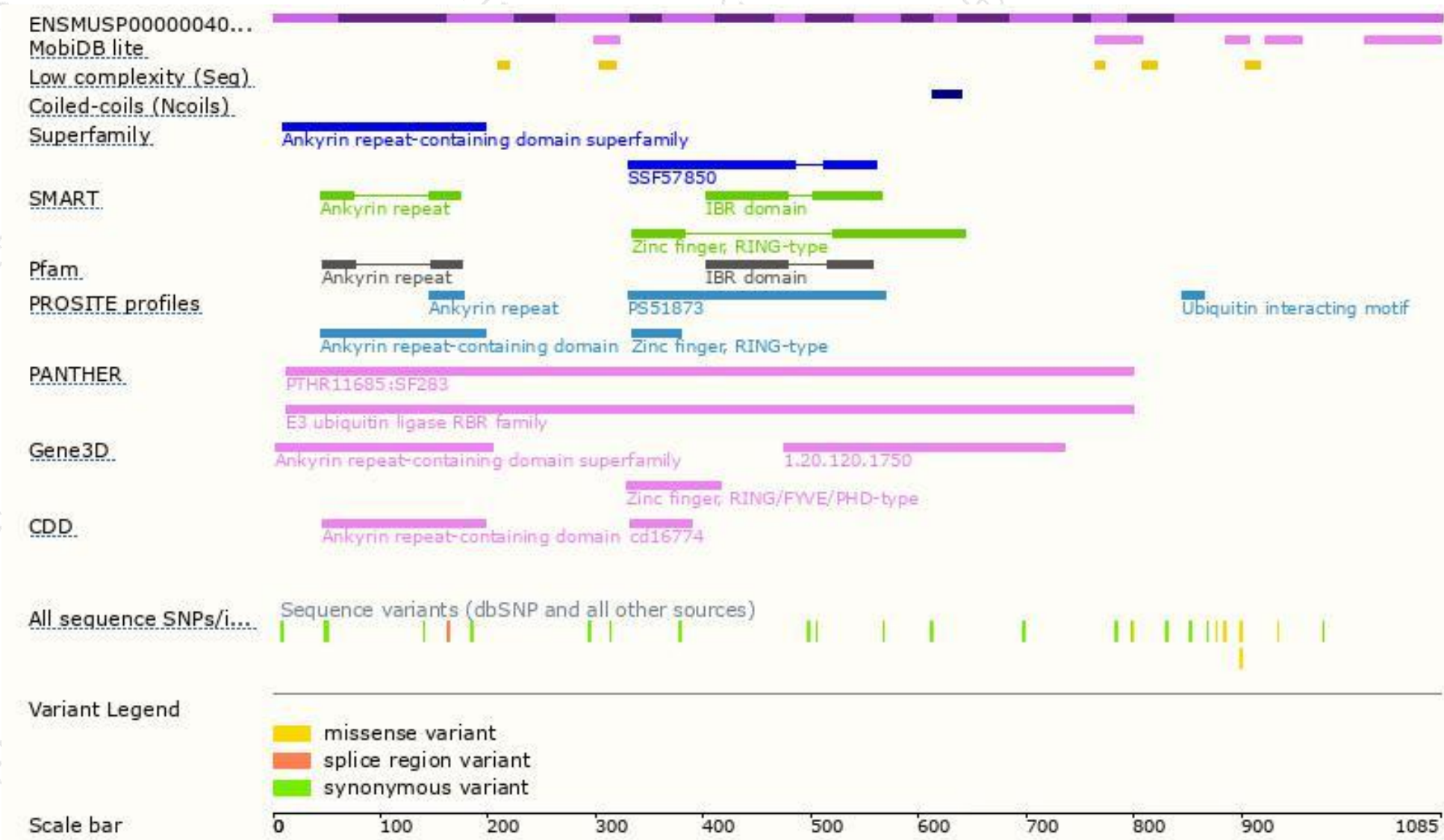
The strategy is based on the design of *Ankib1-201* transcript,The transcription is shown below



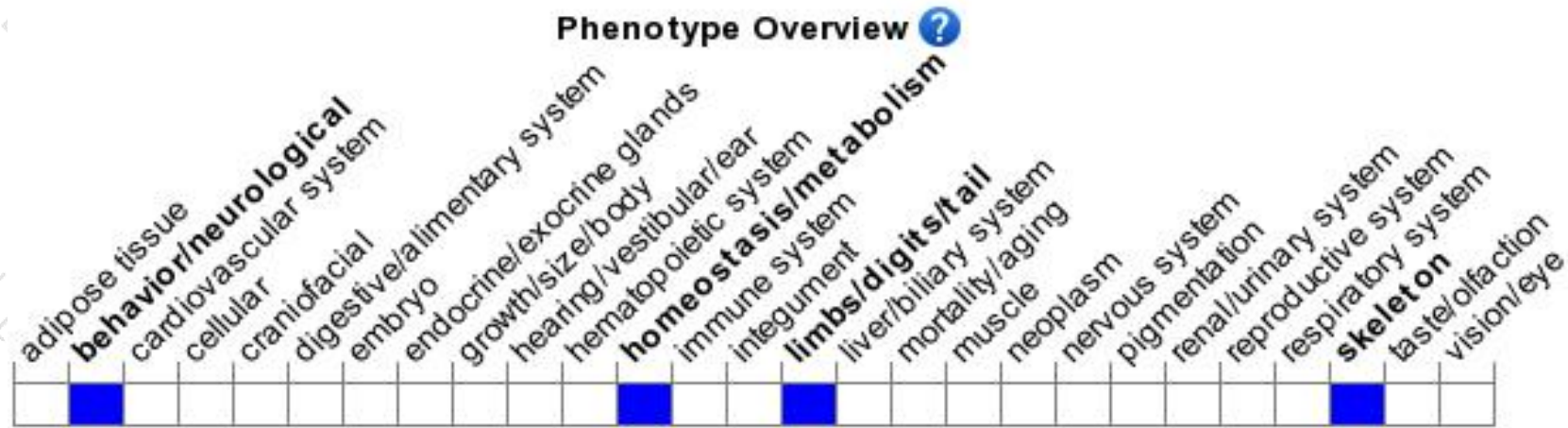
Genomic location distribution



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/>).

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

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