

***Bcorl1* Cas9-KO Strategy**

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Project Overview

Project Name

Bcor11

Project type

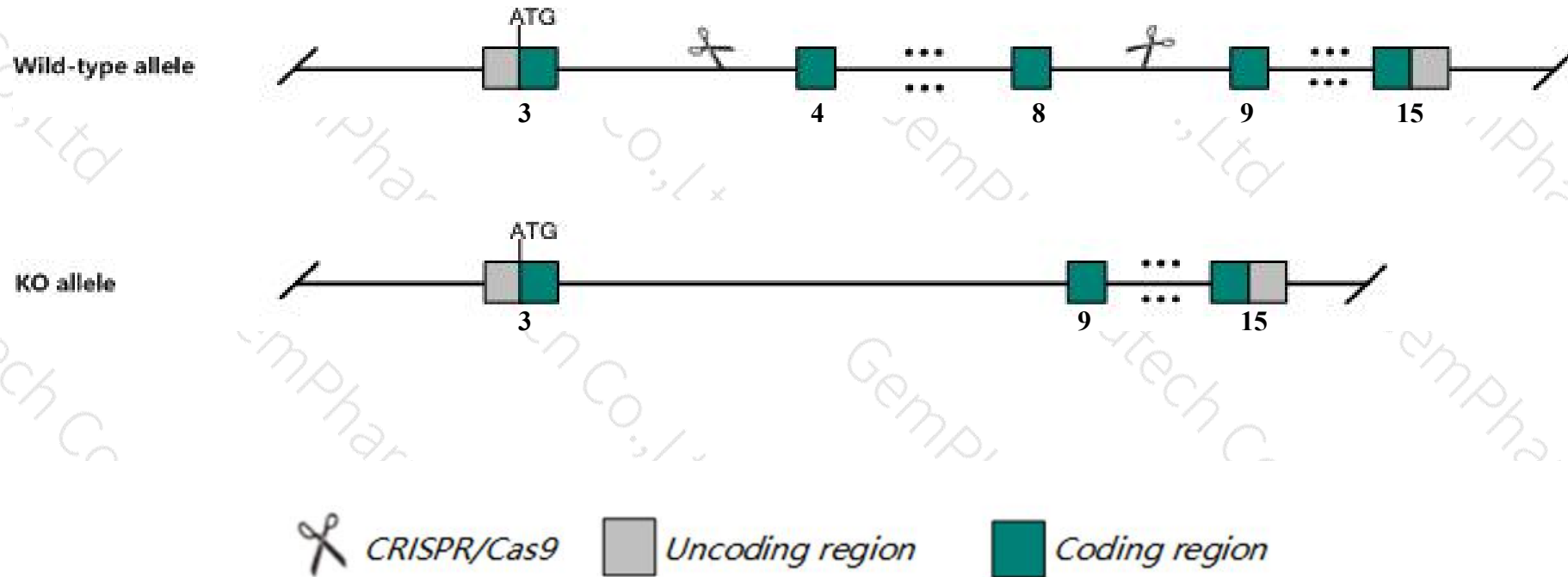
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Bcor11* gene. The schematic diagram is as follows:



- The *Bcor11* gene has 6 transcripts. According to the structure of *Bcor11* gene, exon4-exon8 of *Bcor11*-203 (ENSMUST00000136348.7) transcript is recommended as the knockout region. The region contains 3989bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Bcor11* gene. The brief process is as follows: CRISPR/Cas9 system

- Transcript *Bcorl1*-206 may not be affected . And the effect on transcript *Bcorl1*-204 is unknown.
- The *Bcorl1* gene is located on the ChrX. 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)

Bcorl1 BCL6 co-repressor-like 1 [*Mus musculus* (house mouse)]

Gene ID: 320376, updated on 12-Aug-2019

Summary

- Official Symbol** Bcorl1 provided by MGI
- Official Full Name** BCL6 co-repressor-like 1 provided by MGI
- Primary source** MGI:MGI:2443910
- See related** Ensembl:ENSMUSG00000036959
- 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** 6720425J07Rik; B930011H20Rik
- Expression** Ubiquitous expression in limb E14.5 (RPKM 2.4), CNS E11.5 (RPKM 2.3) and 28 other tissues [See more](#)
- Orthologs** [human](#) [all](#)

Genomic context

Location: X; X A5 [See Bcorl1 in Genome Data Viewer](#)

Exon count: 19

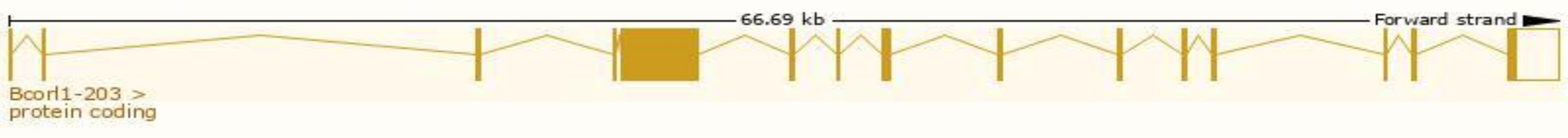
Annotation release	Status	Assembly	Chr	Location
108	current	GRCm38.p6 (GCF_000001635.26)	X	NC_000086.7 (48341358..48408068)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	X	NC_000086.6 (45694535..45759905)

Transcript information (Ensembl)

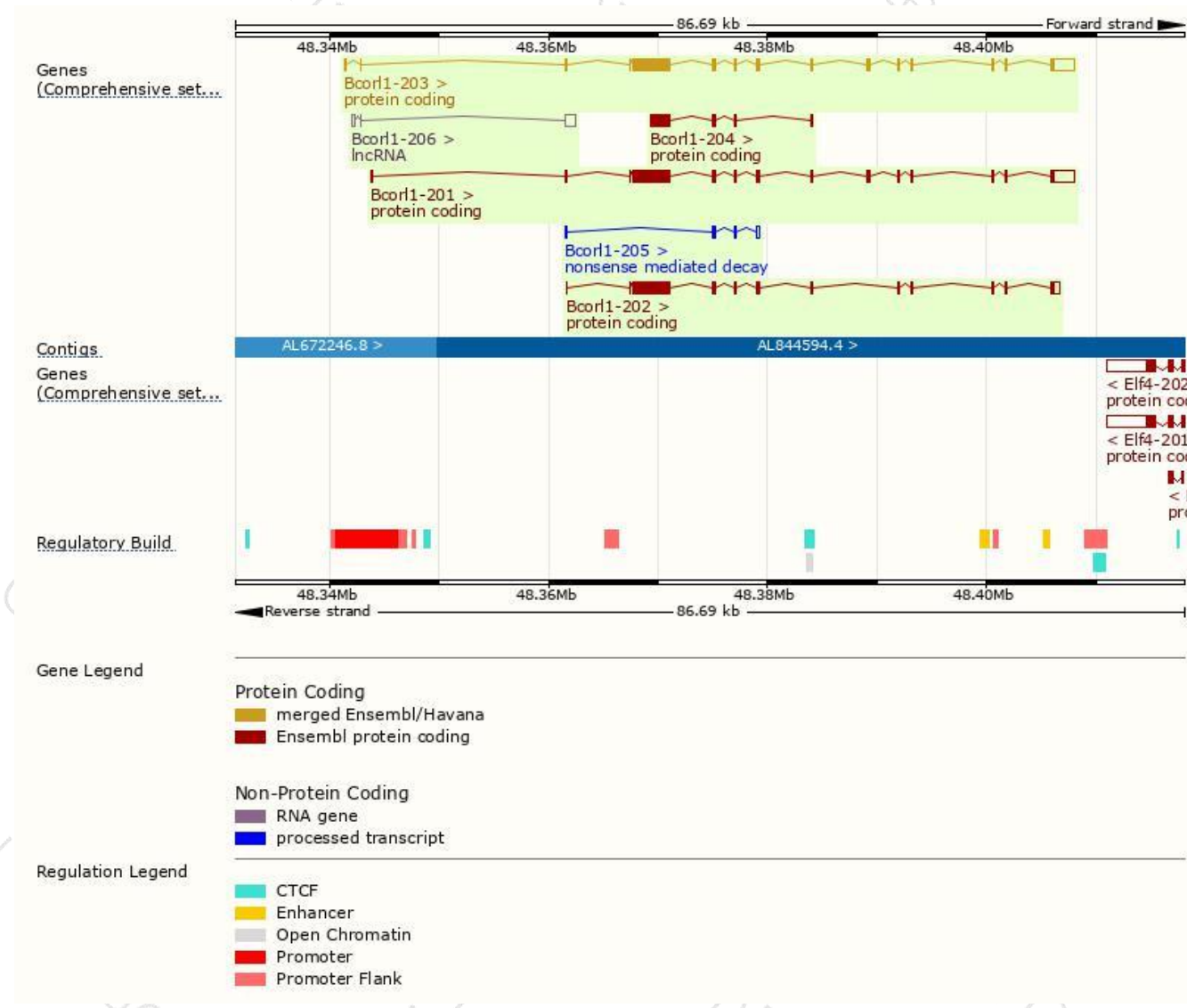
The gene has 6 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Bcorl1-203	ENSMUST00000136348.7	7446	1781aa	Protein coding	CCDS40961	A2AQH4	TSL:5 GENCODE basic APPRIS P1
Bcorl1-201	ENSMUST00000037596.12	7360	1781aa	Protein coding	CCDS40961	A2AQH4	TSL:5 GENCODE basic APPRIS P1
Bcorl1-202	ENSMUST00000114972.8	5591	1693aa	Protein coding	-	F8WJL9	CDS 5' incomplete TSL:5
Bcorl1-204	ENSMUST00000142160.2	2236	746aa	Protein coding	-	F6ZBD9	5' and 3' truncations in transcript evidence prevent annotation of the start and the end of the CDS. CDS 5' and 3' incomplete TSL:5
Bcorl1-205	ENSMUST00000156042.1	738	48aa	Nonsense mediated decay	-	D6REH6	TSL:3
Bcorl1-206	ENSMUST00000156703.1	1160	No protein	lncRNA	-	-	TSL:1

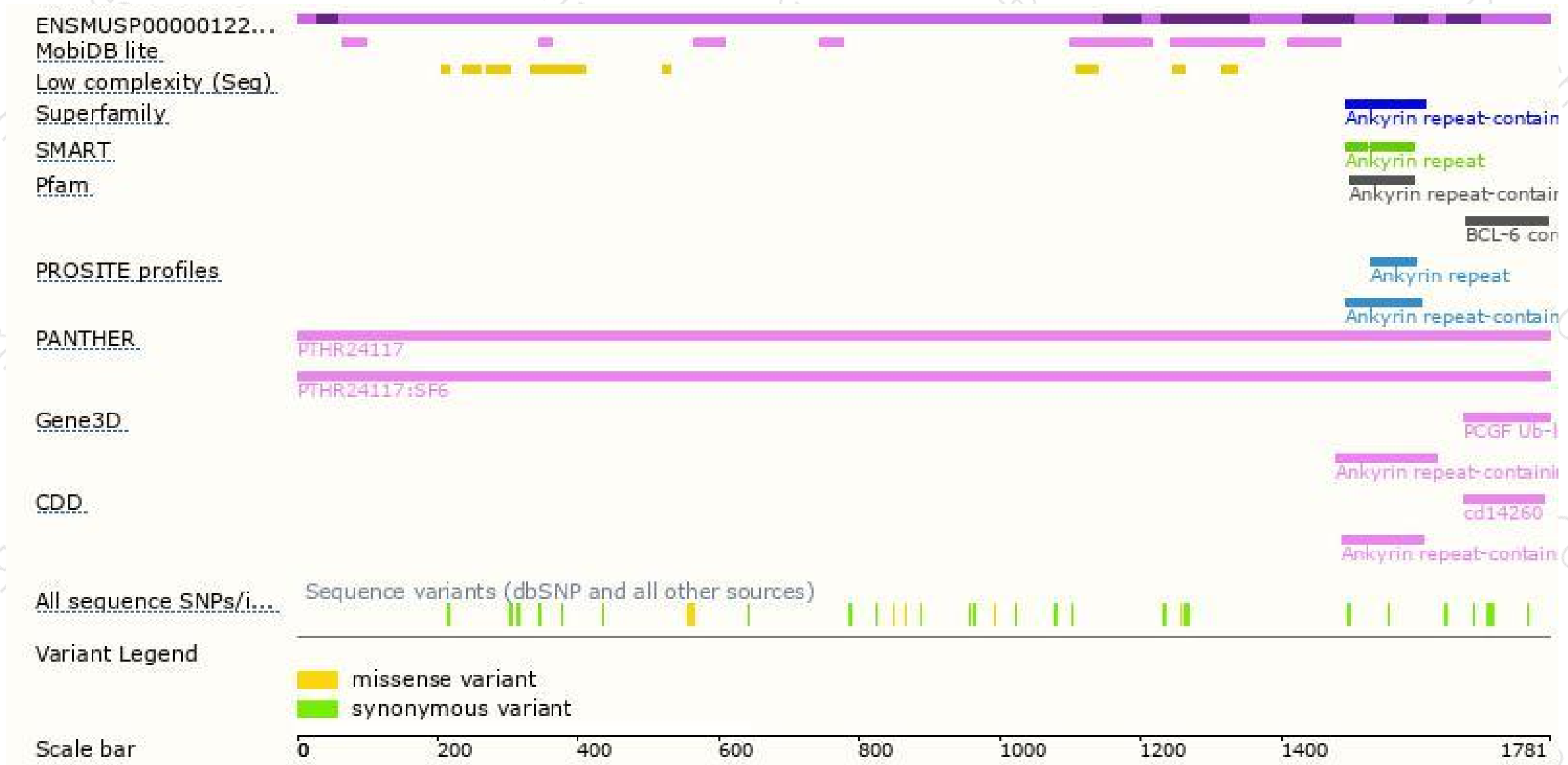
The strategy is based on the design of *Bcorl1-203* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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