Wfdc11 Cas9-KO Strategy

Designer: **Bingxuan Li**

Reviewer: **Huimin Su**

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Project Overview

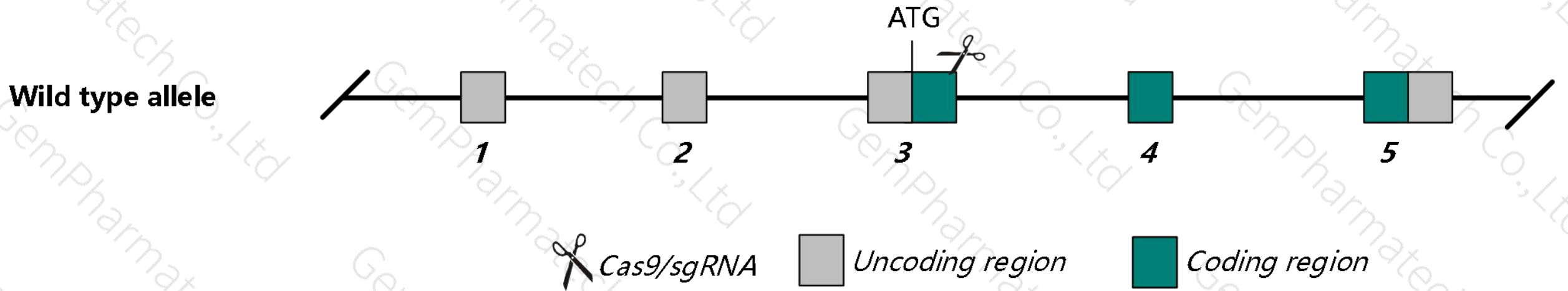|	
Project Name	*Wfdc11*
Project type	**Cas9-KO**
Strain background	**C57BL/6N**

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Wfdc11* gene. The schematic diagram is as follows:

Technical routes

➤ In this project we use CRISPR/Cas9 technology to modify *Wfdc11* gene. The brief process is as follows: sgRNA was transcribed in vitro.Cas9 and sgRNA were microinjected into the fertilized eggs of C57BL/6N 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/6N mice.

Notice

➢ The *Wfdc11* gene is located on the Chr2. 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）

Wfdc11 WAP four-disulfide core domain 11 [*Mus musculus* (house mouse)]

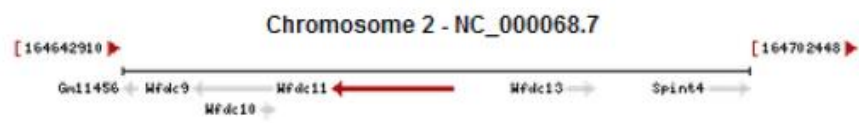Gene ID: 629761, updated on 17-Mar-2015

▲ Summary

Official Symbol	Wfdc11 provided by MGI
Official Full Name	WAP four-disulfide core domain 11 provided by MGI
Primary source	MGI:MGI:3651686
See related	Ensembl:ENSMUSG00000078940; Vega:OTTMUSG00000016290
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus; Mus
Orthologs	human all

▲ Genomic context

Location: 2; 2 H3

See Wfdc11 in MapV

Exon count: 5

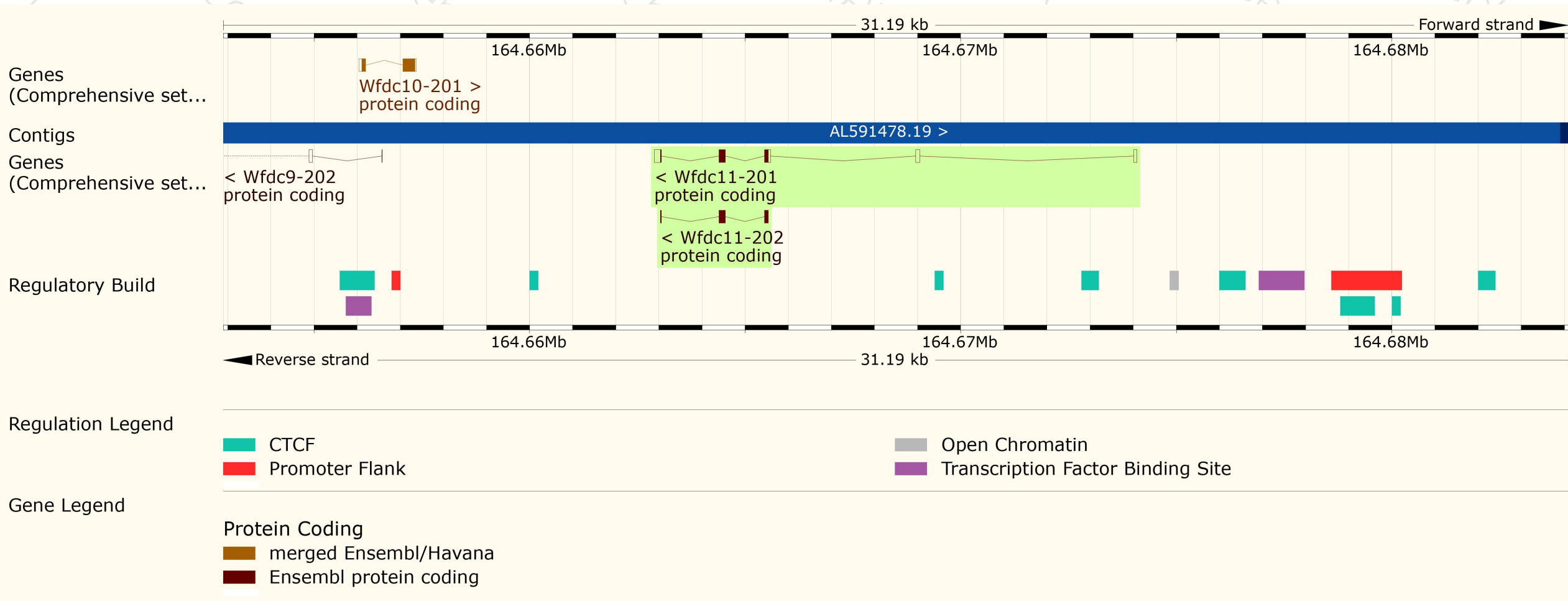| Annotation release	Status	Assembly	Chr	Location
105	current	GRCm38.p3 (GCF_000001635.23)	2	NC_000068.7 (164662894..164674253, complement)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	2	NC_000068.6 (164488394..164499587, complement)

Chromosome 2 - NC_000068.7

[164642910 ▶]   [164702448 ▶]

Gn11456 Wfdc9   Wfdc11   Wfdc13   Spint4

Wfdc10

Transcript information（Ensembl）

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

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags		
Wfdc11-201	ENSMUST00000109332.7	617	82aa	Protein coding	CCDS50797	A2A5H7	TSL:1	GENCODE basic	APPRIS P1
Wfdc11-202	ENSMUST00000167694.1	249	82aa	Protein coding	CCDS50797	A2A5H7	TSL:5	GENCODE basic	APPRIS P1

Genomic location distribution

If you have any questions, you are welcome to inquire.
Tel: 025-5864 1534

集萃药康生物科技
GemPharmatech Co.,Ltd