

Wwp1 Cas9-KO Strategy

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Reviewer:

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Design Date:

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Project Overview

Project Name

Wwp1

Project type

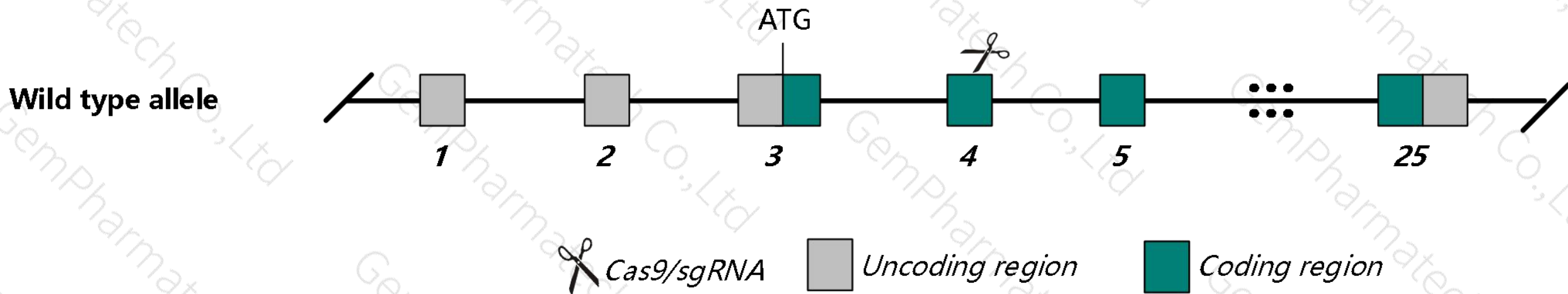
Cas9-KO

Strain background

C57BL/6N

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Wwp1* gene. The schematic diagram is as follows:



- In this project we use CRISPR/Cas9 technology to modify *Wwp1* 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.

- The *Wwp1* gene is located on the Chr4. 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)

Wwp1 WW domain containing E3 ubiquitin protein ligase 1 [*Mus musculus* (house mouse)]

Gene ID: 107568, updated on 19-Mar-2015

Summary

Official Symbol Wwp1 provided by MGI
Official Full Name WW domain containing E3 ubiquitin protein ligase 1 provided by MGI
Primary source MGI:MGI:1861728
See related Ensembl:ENSMUSG000000041058; Vega:OTTMUSG00000006367
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
Also known as AIP5; SDRP1; Tiul1; 8030445B08Rik
Orthologs [human](#) [all](#)

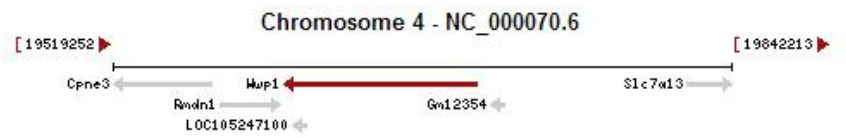
Genomic context

Location: 4; 4 A3

See Wwp1 in [Map](#)

Exon count: 27

Annotation release	Status	Assembly	Chr	Location
105	current	GRCm38.p3 (GCF_000001635.23)	4	NC_000070.6 (19608296..19709004, complement)
Build 37.2	previous assembly	MGSCv37 (GCF_000001635.18)	4	NC_000070.5 (19536820..19636140, complement)

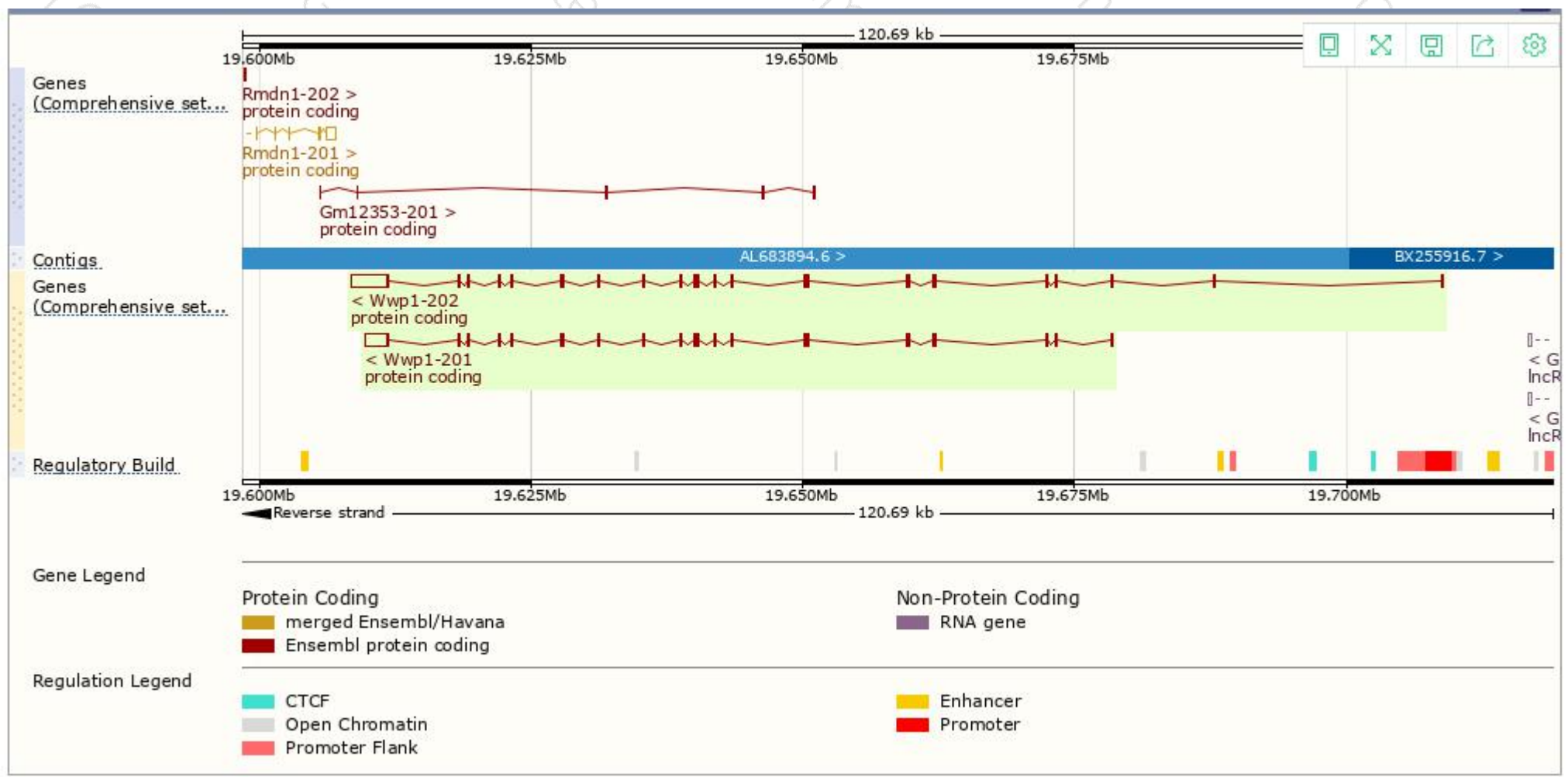


Transcript information (Ensembl)

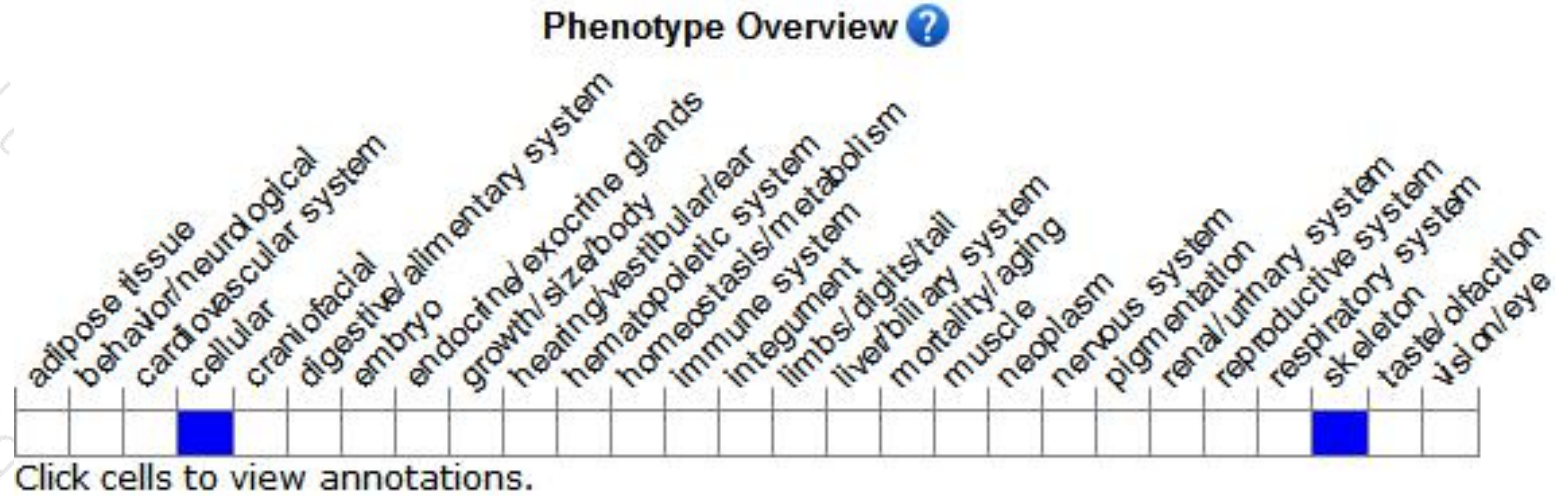
The gene has 2 transcripts,all transcripts are shown below:

Show/hide columns (1 hidden)							Filter	
Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags	
Wwp1-202	ENSMUST00000108246.8	6440	918aa	Protein coding	CCDS38697	Q8BZZ3	TSL:1	GENCODE basic APPRIS P1
Wwp1-201	ENSMUST00000035982.7	4832	918aa	Protein coding	CCDS38697	Q8BZZ3	TSL:5	GENCODE basic APPRIS P1

Genomic location distribution



Mouse phenotype description(MGI)



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

Mice homozygous for a knock-out allele exhibit increased osteoblast differentiation of bone marrow-derived stromal cells.

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

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