

Wtip Cas9-CKO Strategy

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Project Overview

Project Name

Wtip

Project type

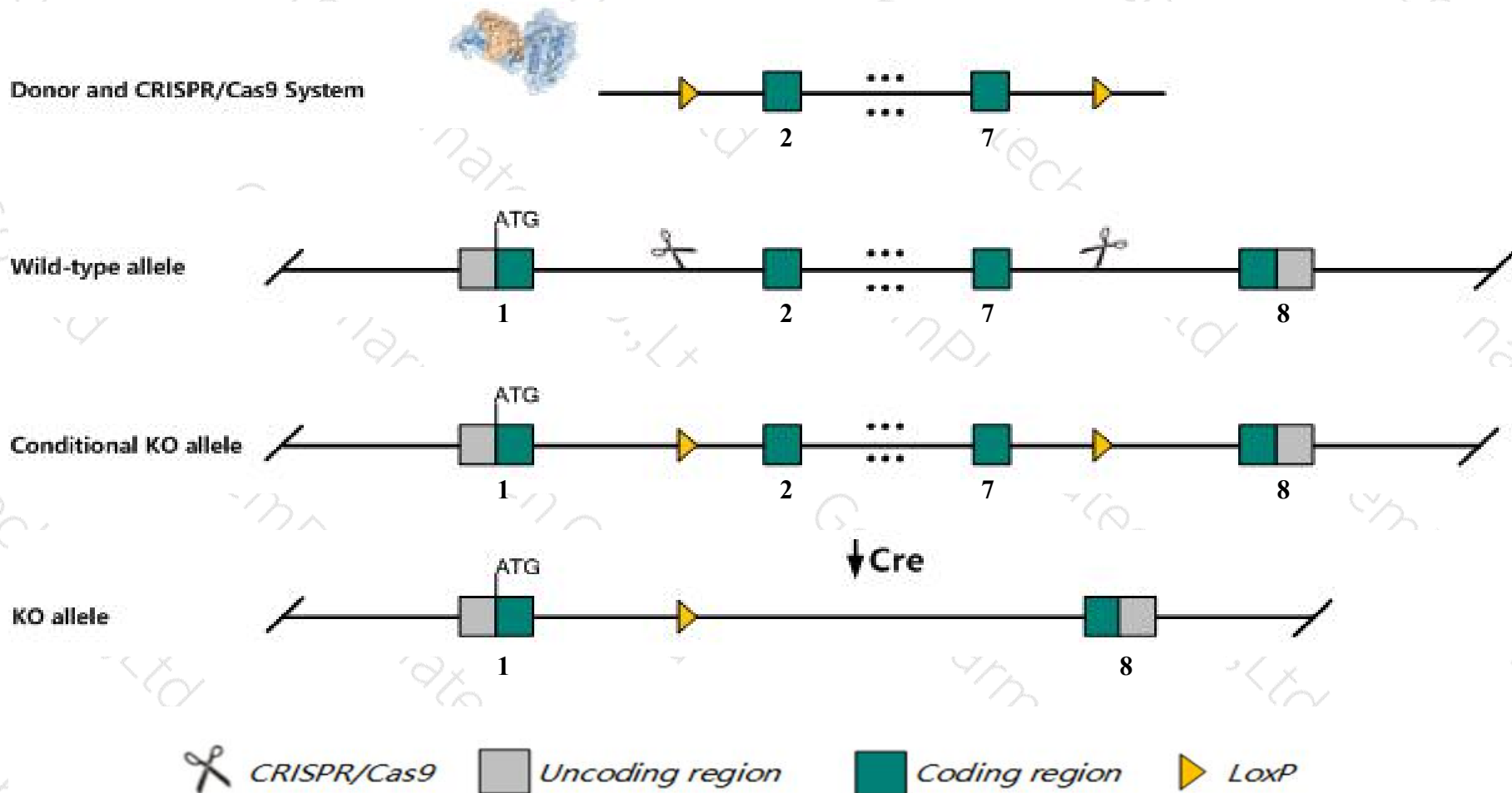
Cas9-CKO

Strain background

C57BL/6JGpt

Conditional Knockout strategy

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



- The *Wtip* gene has 4 transcripts. According to the structure of *Wtip* gene, exon2-exon7 of *Wtip*-201 (ENSMUST00000038537.8) transcript is recommended as the knockout region. The region contains 485bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Wtip* gene. The brief process is as follows: CRISPR/Cas9 system and Donor 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 sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6JGpt mice.
- The flox mice will be knocked out after mating with mice expressing Cre recombinase, resulting in the loss of function of the target gene in specific tissues and cell types.

Notice

- The *Wtip* gene is located on the Chr7. 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.
- Some amino acids will remain at the N-terminus and some functions may be retained.
- This Strategy is designed based on genetic information in existing databases. Due to the complexity of biological processes, all risk of loxp insertion on gene transcription, RNA splicing and protein translation cannot be predicted at existing technological level.

Gene information (NCBI)

Wtip WT1-interacting protein [Mus musculus (house mouse)]

Gene ID: 101543, updated on 31-Jan-2019

Summary



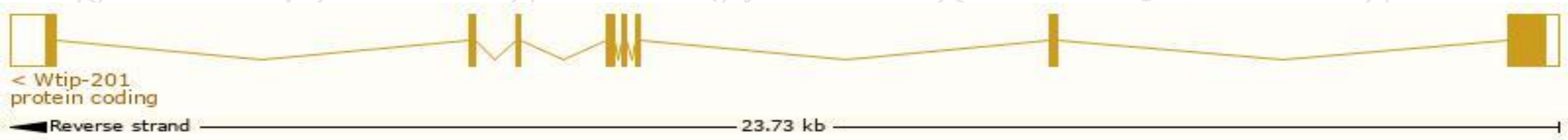
Official Symbol	Wtip provided by MGI
Official Full Name	WT1-interacting protein provided by MGI
Primary source	MGI:MGI:2141920
See related	Ensembl:ENSMUSG000000036459
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Expression	Ubiquitous expression in ovary adult (RPKM 17.3), limb E14.5 (RPKM 14.5) and 27 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

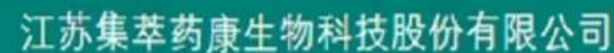
The gene has 4 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Wtip-201	ENSMUST00000038537.8	1962	398aa	Protein coding	CCDS21135	Q7TQJ8	TSL:1 GENCODE basic APPRIS P1
Wtip-203	ENSMUST00000140911.3	968	167aa	Nonsense mediated decay	-	A0A0U1RPS6	CDS 5' incomplete TSL:5
Wtip-202	ENSMUST00000123813.8	531	No protein	Retained intron	-	-	TSL:2
Wtip-204	ENSMUST00000205914.1	500	No protein	lncRNA	-	-	TSL:5

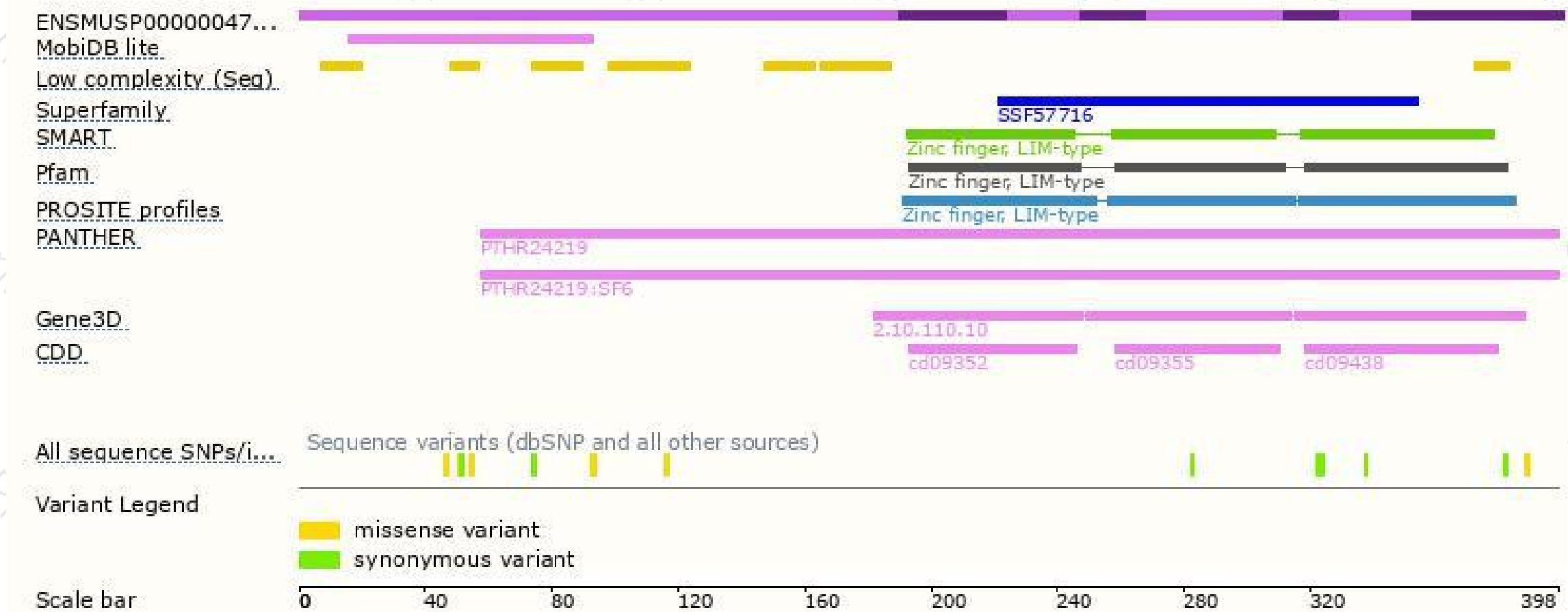
The strategy is based on the design of *Wtip-201* transcript,The transcription is shown below



集萃药康
GemPharmatech



Protein domain



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

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