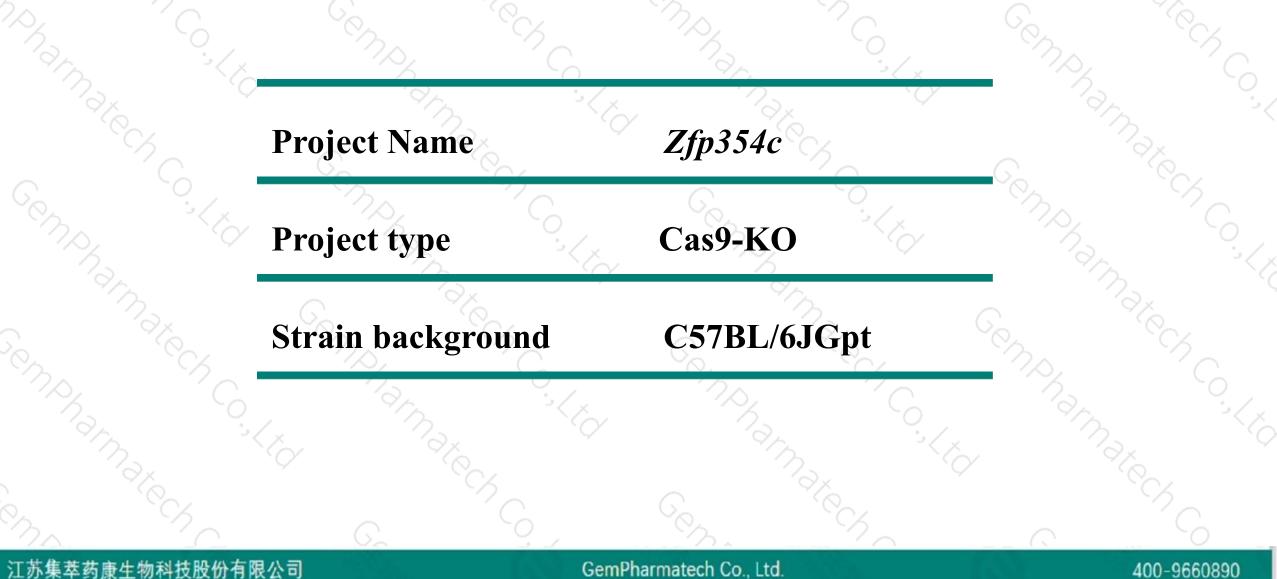


# Zfp354c Cas9-KO Strategy

Designer: Reviewer: Design Date: Yanhua Shen Xueting Zhang 2019-11-11

### **Project Overview**





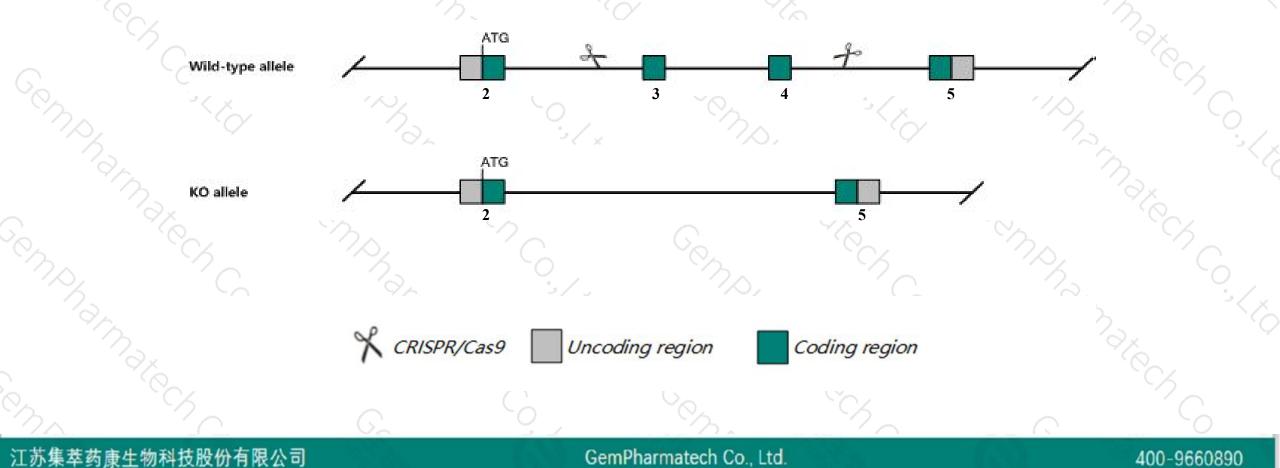
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### **Knockout strategy**



This model will use CRISPR/Cas9 technology to edit the Zfp354c gene. The schematic diagram is as follows:





- The Zfp354c gene has 4 transcripts. According to the structure of Zfp354c gene, exon3-exon4 of Zfp354c-202 (ENSMUST00000109135.8) transcript is recommended as the knockout region. The region contains 220bp coding sequence. Knock out the region will result in disruption of protein function.
- > In this project we use CRISPR/Cas9 technology to modify Zfp354c gene. The brief process is as follows: CRISPR/Cas9 syste

- The Zfp354c gene is located on the Chr11. 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.

Notice

## **Gene information (NCBI)**



☆?

### Zfp354c zinc finger protein 354C [ Mus musculus (house mouse) ]

Gene ID: 30944, updated on 12-Aug-2019

#### Summary

Official Symbol	Zfp354c provided by MGI
Official Full Name	zinc finger protein 354C provided by MGI
Primary source	MGI:MGI:1353621
See related	Ensembl:ENSMUSG00000044807
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	AJ18; Kid3; Tcf17l2; Znf354c; AW743325; mKIAA4218; 5330421P20Rik
Expression	Biased expression in CNS E18 (RPKM 9.9), limb E14.5 (RPKM 9.5) and 11 other tissues See more
Orthologs	human all

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### **Transcript information (Ensembl)**



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

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Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Zfp354c-202	ENSMUST00000109135.8	5325	<u>560aa</u>	Protein coding	CCDS24637	<u>Q571J5</u>	TSL:1 GENCODE basic APPRIS P1
Zfp354c-201	ENSMUST0000000632.6	1683	<u>560aa</u>	Protein coding	CCDS24637	<u>Q571J5</u>	TSL:1 GENCODE basic APPRIS P1
Zfp354c-204	ENSMUST00000139465.1	426	No protein	IncRNA	20	-	TSL:3
Zfp354c-203	ENSMUST00000136333.1	381	No protein	IncRNA	29	2	TSL:2

The strategy is based on the design of Zfp354c-202 transcript, The transcription is shown below

< Zfp354c-202 protein coding

Reverse strand -

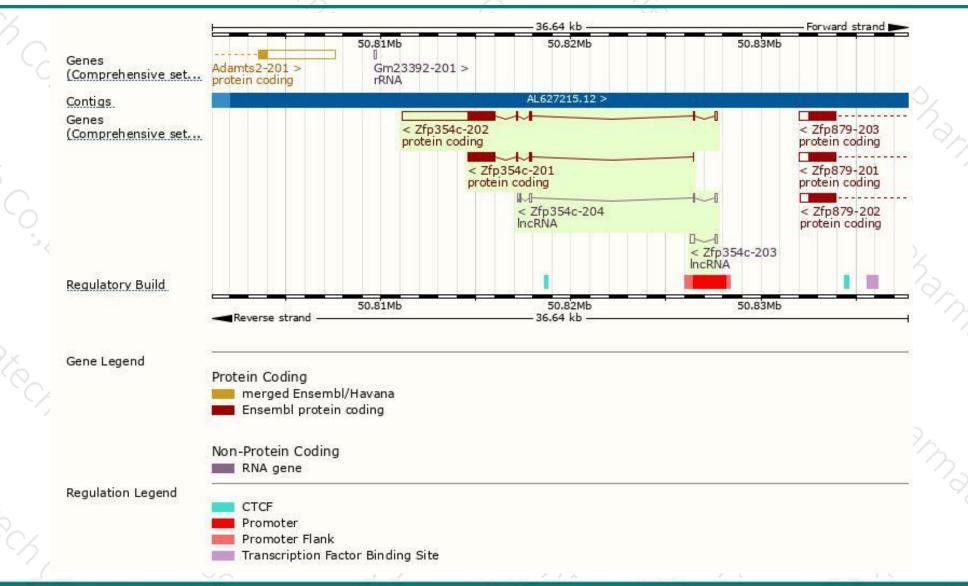
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16.61 kb

### **Genomic location distribution**





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### **Protein domain**



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If you have any questions, you are welcome to inquire. Tel: 400-9660890



