

***Dolpp1* Cas9-KO Strategy**

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Project Overview

Project Name

Dolpp1

Project type

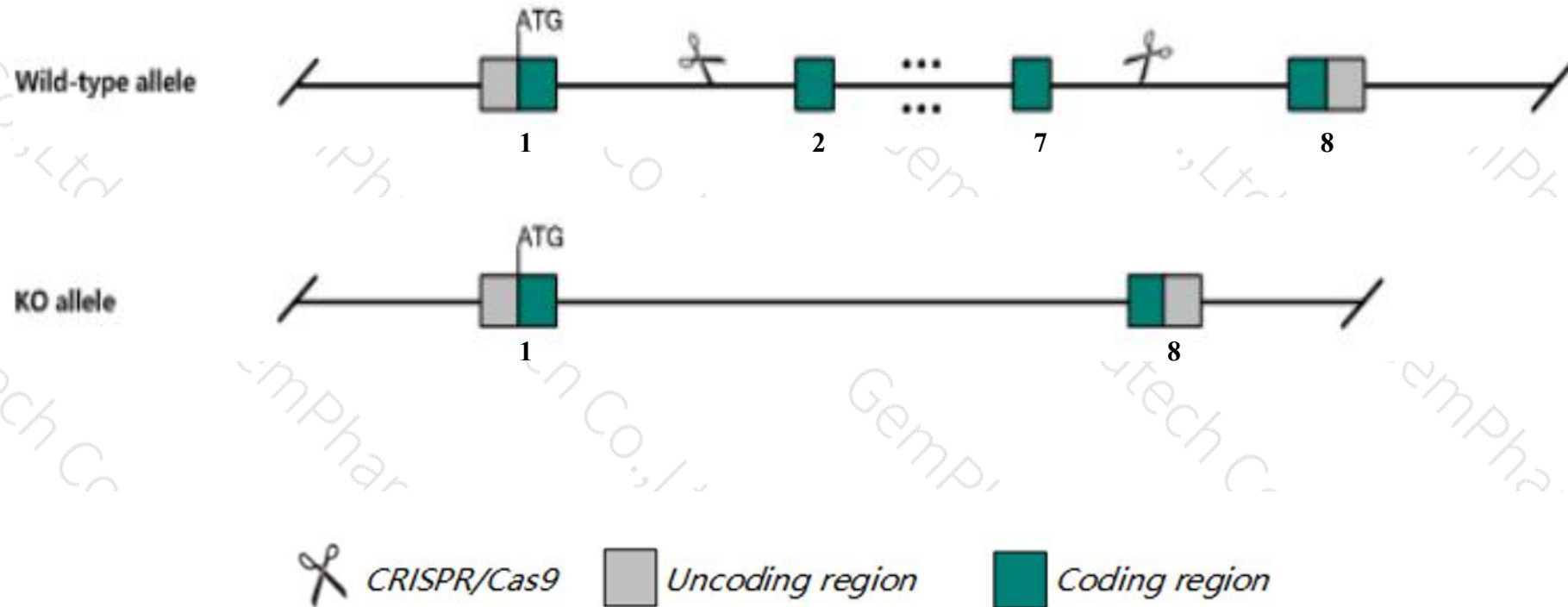
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Dolpp1* gene. The schematic diagram is as follows:



- The *Dolpp1* gene has 11 transcripts. According to the structure of *Dolpp1* gene, exon2-exon7 of *Dolpp1-201* (ENSMUST00000028209.14) transcript is recommended as the knockout region. The region contains 604bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Dolpp1* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Dolpp1* 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)

Dolpp1 dolichyl pyrophosphate phosphatase 1 [Mus musculus (house mouse)]

Gene ID: 57170, updated on 13-Mar-2020

Summary



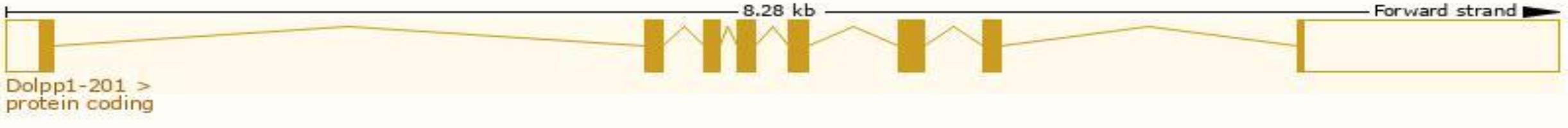
Official Symbol	Dolpp1 provided by MGI
Official Full Name	dolichyl pyrophosphate phosphatase 1 provided by MGI
Primary source	MGI:MGI:1914093
See related	Ensembl:ENSMUSG00000026856
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	0610011H20Rik, AB030189, LSFR2
Expression	Ubiquitous expression in large intestine adult (RPKM 22.0), duodenum adult (RPKM 19.9) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

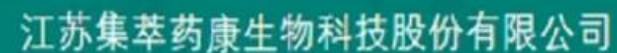
The gene has 11 transcripts,all transcripts are shown below:

Name ▲	Transcript ID ▲	bp ▲	Protein ▲	Biotype ▲	CCDS ▲	UniProt ▲	Flags ▲
Dolpp1-201	ENSMUST00000028209.14	2251	238aa	Protein coding	CCDS15881	Q9JMF7	TSL:1 GENCODE basic APPRIS P1
Dolpp1-202	ENSMUST00000113612.9	1958	195aa	Protein coding	CCDS79768	A2AWJ3	TSL:3 GENCODE basic
Dolpp1-203	ENSMUST00000123202.7	2294	140aa	Protein coding	CCDS71022	A0A140T8S3	TSL:1 GENCODE basic
Dolpp1-204	ENSMUST00000133991.7	919	No protein	Retained intron	-	-	TSL:2
Dolpp1-205	ENSMUST00000137248.7	1851	91aa	Nonsense mediated decay	-	F6QGX7	CDS 5' incomplete TSL:5
Dolpp1-206	ENSMUST00000151018.1	537	No protein	Processed transcript	-	-	TSL:5
Dolpp1-207	ENSMUST00000152303.1	984	No protein	Processed transcript	-	-	TSL:1
Dolpp1-208	ENSMUST00000155196.1	902	89aa	Nonsense mediated decay	-	F6T220	CDS 5' incomplete TSL:3
Dolpp1-209	ENSMUST00000156059.7	767	No protein	Retained intron	-	-	TSL:2
Dolpp1-210	ENSMUST00000156704.1	336	No protein	Retained intron	-	-	TSL:3
Dolpp1-211	ENSMUST00000156984.7	354	No protein	Retained intron	-	-	TSL:2

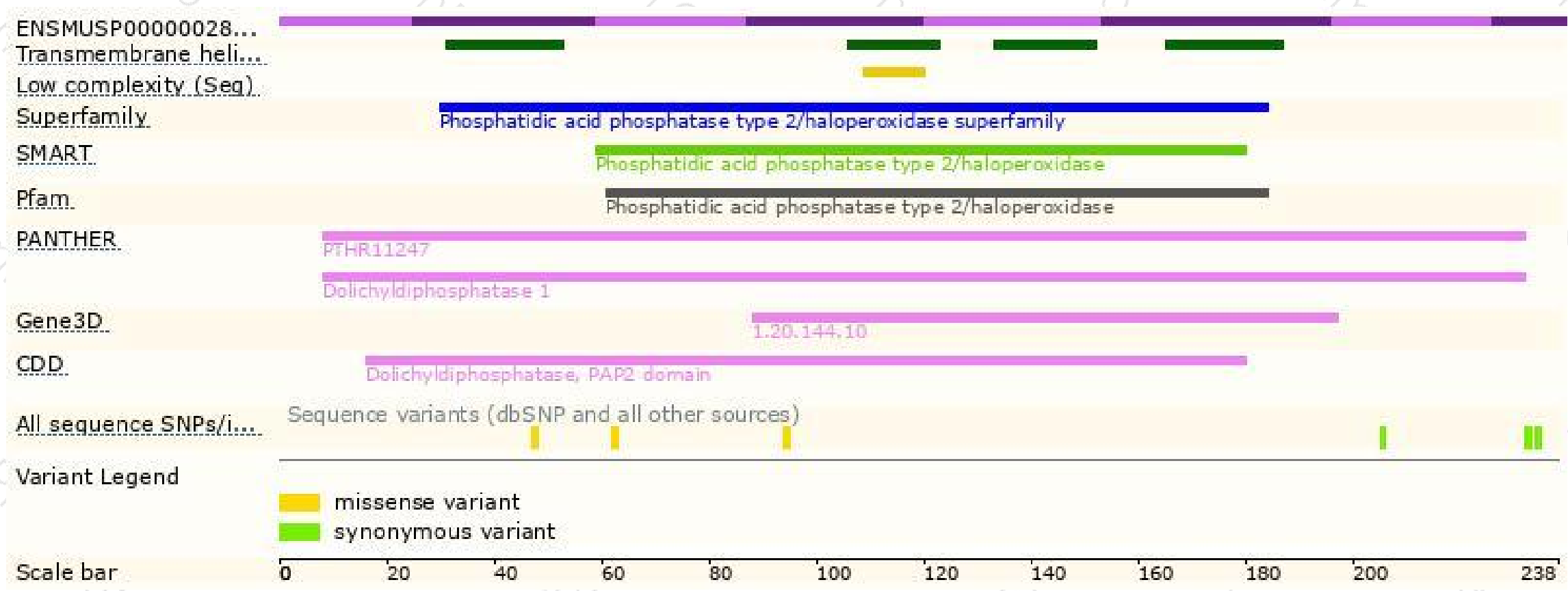
The strategy is based on the design of *Dolpp1-201* transcript,The transcription is shown below



集萃药康
GemPharmatech



Protein domain



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

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