

B3gat2 Cas9-KO Strategy

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Project Overview

Project Name

B3gat2

Project type

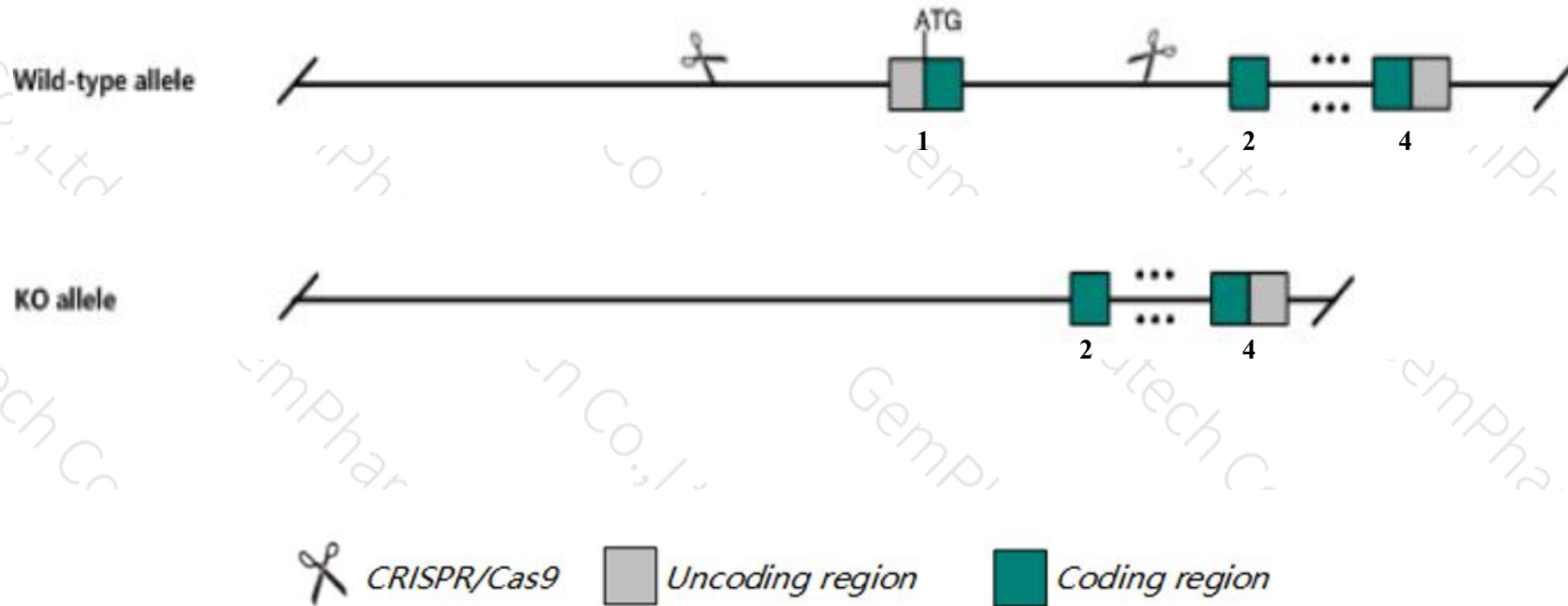
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *B3gat2* gene. The schematic diagram is as follows:



- The *B3gat2* gene has 3 transcripts. According to the structure of *B3gat2* gene, exon1 of *B3gat2-201* (ENSMUST00000063663.5) transcript is recommended as the knockout region. The region contains start codon ATG. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *B3gat2* gene. The brief process is as follows: CRISPR/Cas9 system

- The *B3gat2* gene is located on the Chr1. 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)

B3gat2 beta-1,3-glucuronyltransferase 2 (glucuronosyltransferase S) [Mus musculus (house mouse)]

Gene ID: 280645, updated on 31-Jan-2019

Summary



Official Symbol	B3gat2 provided by MGI
Official Full Name	beta-1,3-glucuronyltransferase 2 (glucuronosyltransferase S) provided by MGI
Primary source	MGI:MGI:2389490
See related	Ensembl:ENSMUSG00000026156
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	GlcAT-S, Glcats
Expression	Ubiquitous expression in kidney adult (RPKM 17.5), testis adult (RPKM 14.6) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
B3gat2-201	ENSMUST00000063663.5	5655	324aa	Protein coding	CCDS14850	P59270	TSL:1 GENCODE basic APPRIS P1
B3gat2-202	ENSMUST00000140583.1	1737	302aa	Protein coding	-	P59270	TSL:1 GENCODE basic
B3gat2-203	ENSMUST00000144602.1	1488	104aa	Protein coding	-	D3YY32	TSL:1 GENCODE basic

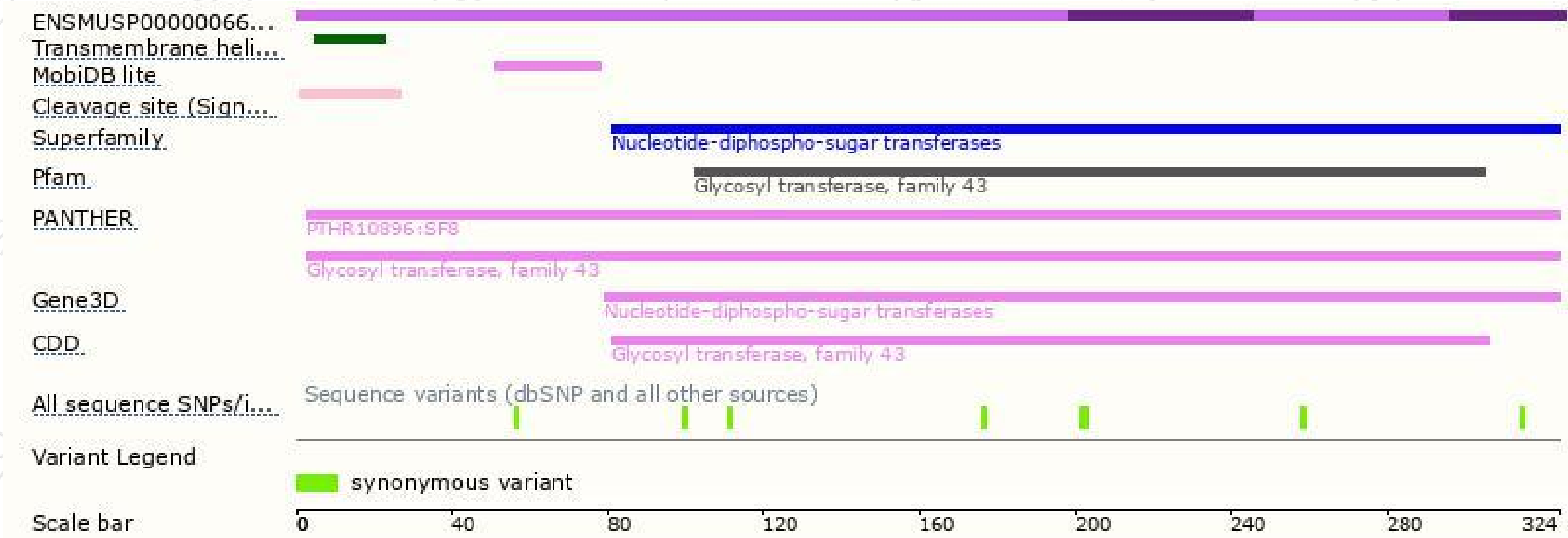
The strategy is based on the design of *B3gat2-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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