

# *Pard6b* Cas9-KO Strategy

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**Reviewer:**

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# Project Overview

**Project Name**

*Pard6b*

**Project type**

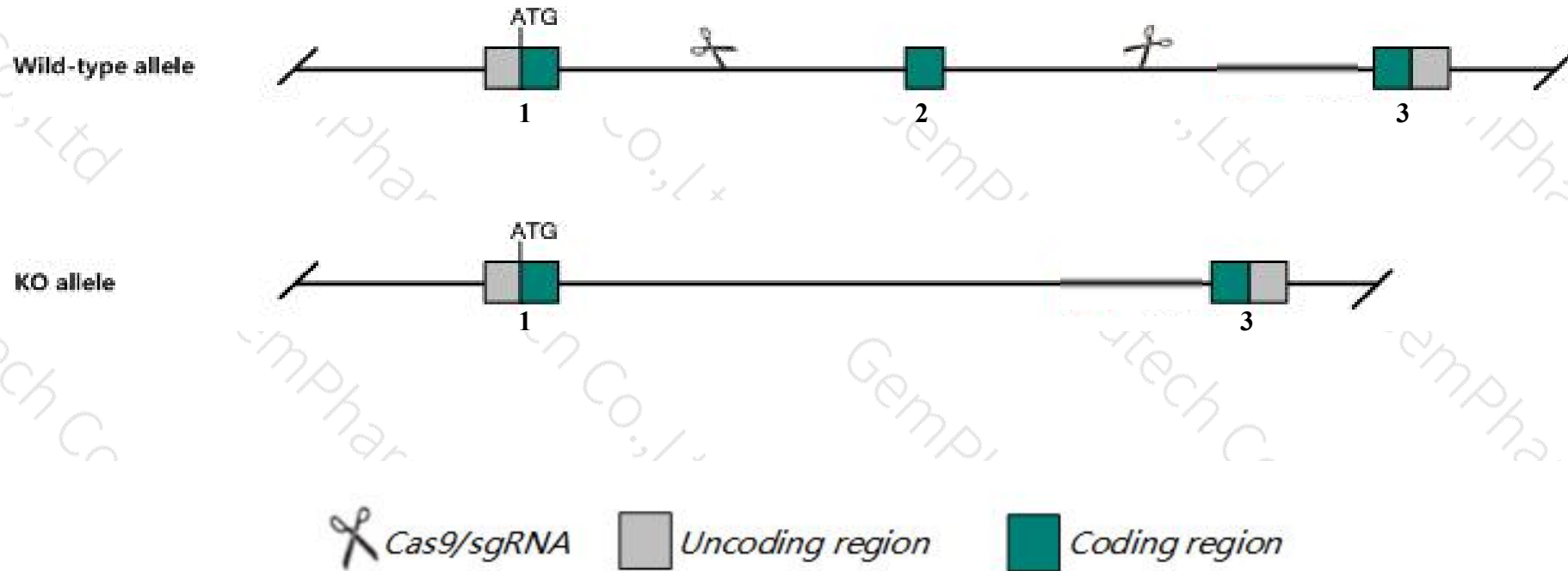
**Cas9-KO**

**Strain background**

**C57BL/6JGpt**

# Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Pard6b* gene. The schematic diagram is as follows:



- The *Pard6b* gene has 1 transcript. According to the structure of *Pard6b* gene, exon2 of *Pard6b-201* (ENSMUST00000052125.6) transcript is recommended as the knockout region. The region contains 223bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Pard6b* gene. The brief process is as follows: CRISPR/Cas9 system

- The Pard6b 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)

## Pard6b par-6 family cell polarity regulator beta [ *Mus musculus* (house mouse) ]

Gene ID: 58220, updated on 12-Aug-2019

### Summary

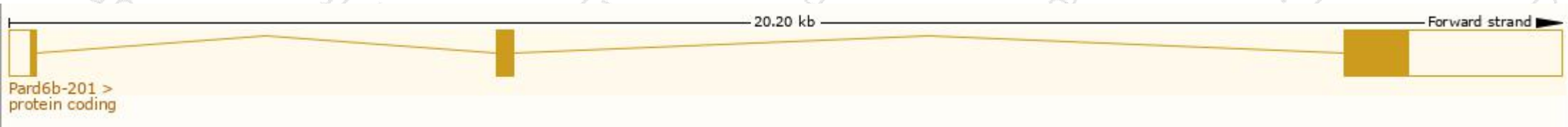
Official Symbol	Pard6b provided by <a href="#">MGI</a>
Official Full Name	par-6 family cell polarity regulator beta provided by <a href="#">MGI</a>
Primary source	<a href="#">MGI:MGI:2135605</a>
See related	<a href="#">Ensembl:ENSMUSG00000044641</a>
Gene type	protein coding
RefSeq status	VALIDATED
Organism	<a href="#">Mus musculus</a>
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	Par6b; AV025615
Expression	Broad expression in lung adult (RPKM 10.3), kidney adult (RPKM 8.3) and 23 other tissues <a href="#">See more</a>
Orthologs	<a href="#">human</a> <a href="#">all</a>

# Transcript information (Ensembl)

The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Pard6b-201	<a href="#">ENSMUST00000052125.6</a>	3399	<a href="#">371aa</a>	Protein coding	<a href="#">CCDS17108</a>	<a href="#">Q9JK83</a>	TSL:1 GENCODE basic APPRIS P1

The strategy is based on the design of *Pard6b-201* transcript, The transcription is shown below



# Protein domain





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

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