

Tas2r119 Cas9-KO Strategy

Designer:

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Design Date:

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Project Overview

Project Name

Tas2r119

Project type

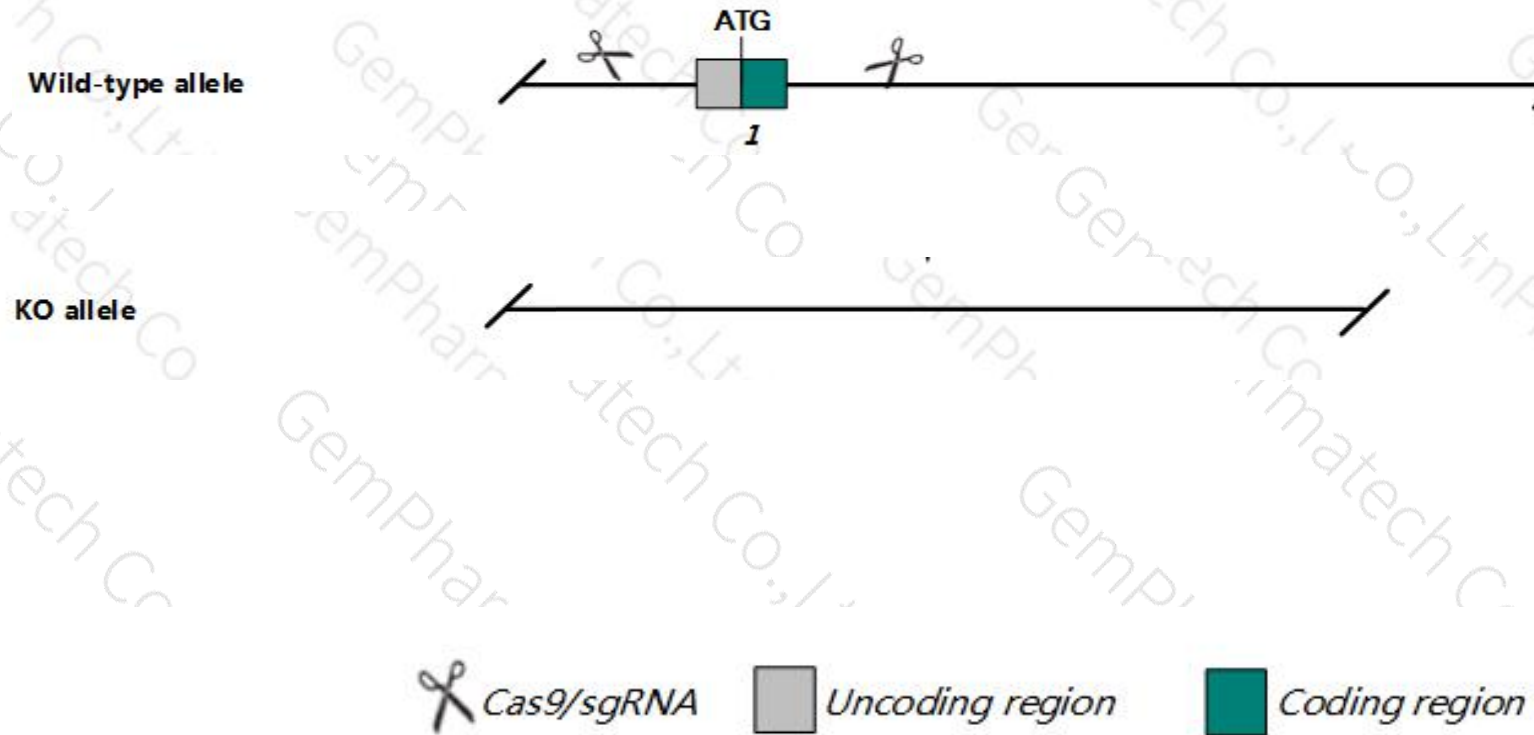
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Tas2r119* gene. The schematic diagram is as follows:



- The *Tas2r119* gene has 1 transcripts. According to the structure of *Tas2r119* gene, exon3 of *Tas2r119-201* (ENSMUST00000057633.3) transcript is recommended as the knockout region. The region contains all coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Tas2r119* gene. The brief process is as follows: CRISPR/Cas9 syst

- The *Tas2r119* gene is located on the Chr15. 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)

Tas2r119 taste receptor, type 2, member 119 [*Mus musculus* (house mouse)]

Gene ID: 57254, updated on 18-Sep-2018

Summary

Official Symbol Tas2r119 provided by [MGI](#)

Official Full Name taste receptor, type 2, member 119 provided by [MGI](#)

Primary source [MGI:MGI:2681253](#)

See related [Ensembl:ENSMUSG000000045267](#) [Vega:OTTMUSG000000057546](#)

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 T2r19; mGR19; mt2r19; Tas2r19

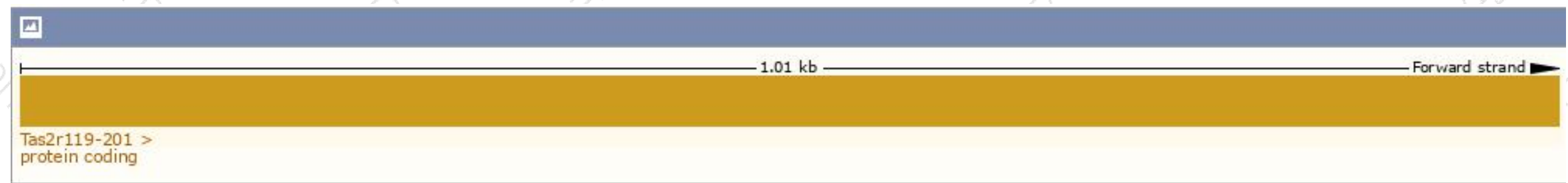
Orthologs [human](#) [all](#)

Transcript information (Ensembl)

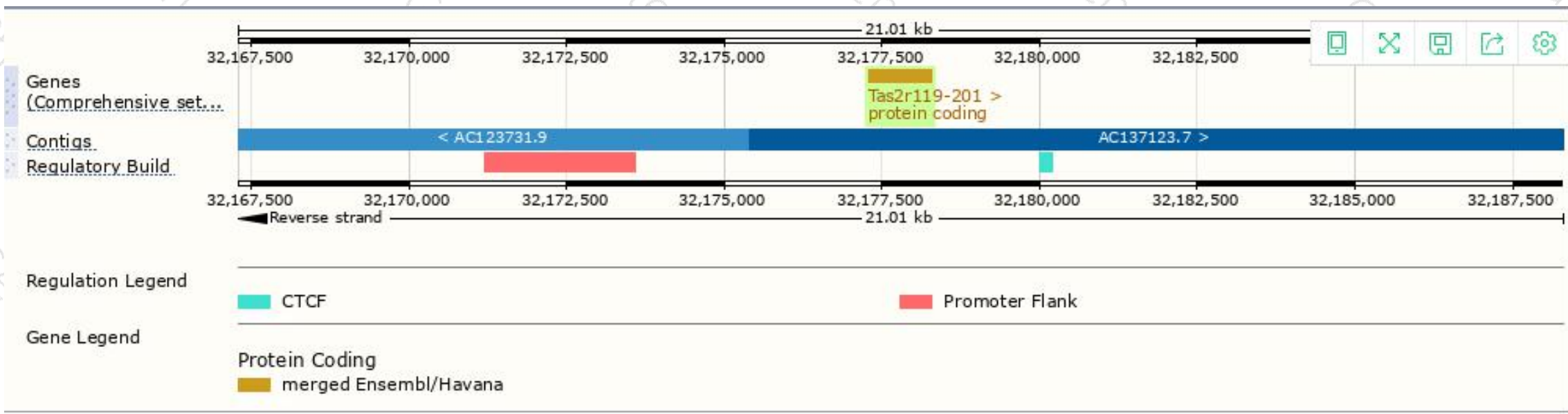
The gene has 1 transcripts,all transcripts are shown below:

Show/hide columns (1 hidden)								Filter	
Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	RefSeq	Flags	
Tas2r119-201	ENSMUST00000057633.3	1006	334aa	Protein coding	CCDS49590	G3X986	NM_020503 NP_065249	TSL:NA	GENCODE basic APPRIS P1

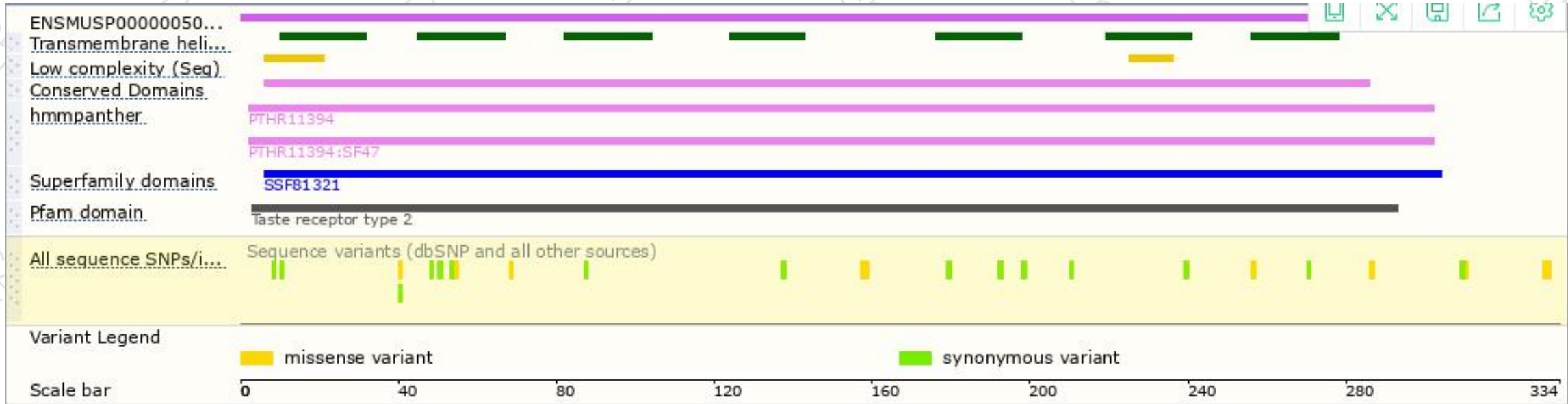
The strategy is based on the design of *Tas2r119-201* transcript,The transcription is shown below



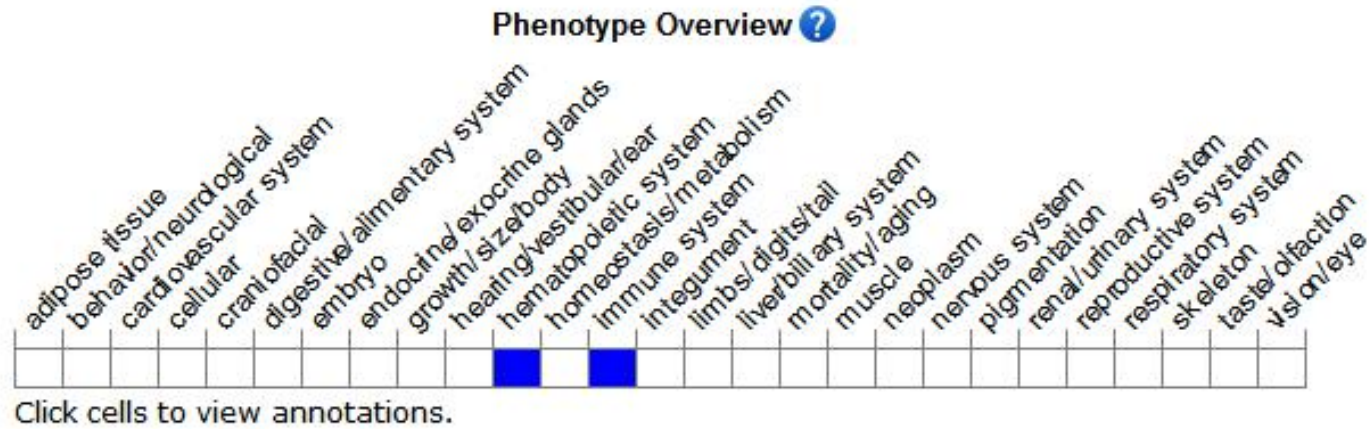
Genomic location distribution



Protein domain



Mouse phenotype description(MGI)



Phenotypes affected by the gene are marked in blue. Data quoted from MGI database(<http://www.informatics.jax.org/>).

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

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