

Htr3b Cas9-KO Strategy

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Project Overview

Project Name

Htr3b

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Htr3b* gene. The schematic diagram is as follows:



- The *Htr3b* gene has 1 transcript. According to the structure of *Htr3b* gene, exon2 of *Htr3b-201* (ENSMUST00000008734.4) transcript is recommended as the knockout region. The region contains 161bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Htr3b* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Htr3b* gene is located on the Chr9. 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.

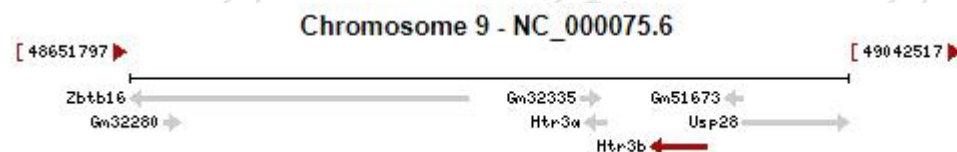
Gene information (NCBI)

Htr3b 5-hydroxytryptamine (serotonin) receptor 3B [*Mus musculus* (house mouse)]

Gene ID: 57014, updated on 12-Aug-2019

Summary

Official Symbol	Htr3b provided by MGI
Official Full Name	5-hydroxytryptamine (serotonin) receptor 3B provided by MGI
Primary source	MGI:MGI:1861899
See related	Ensembl:ENSMUSG00000008590
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	5-HT3B
Expression	Low expression observed in reference dataset See more
Orthologs	human all

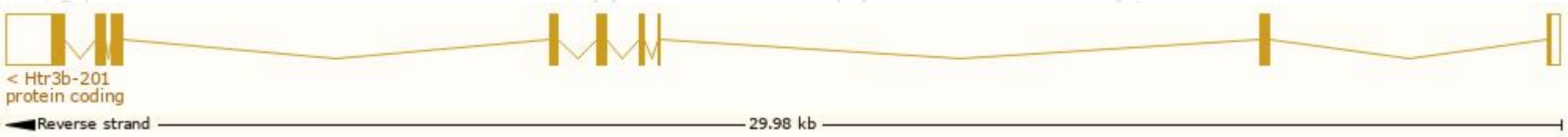


Transcript information (Ensembl)

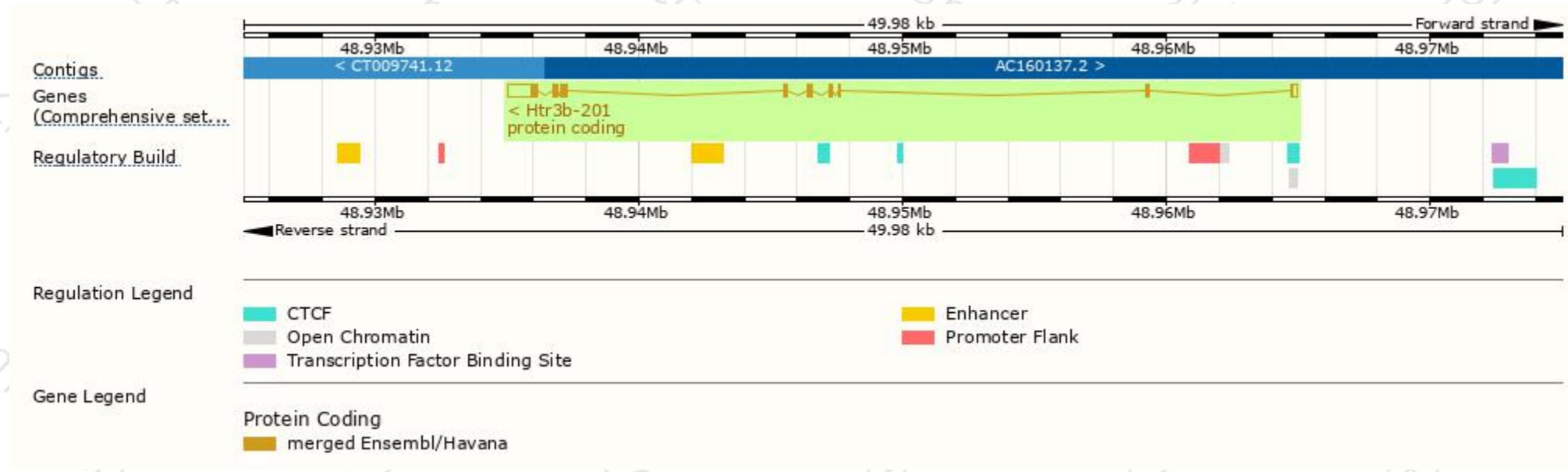
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Htr3b-201	ENSMUST00000008734.4	2411	437aa	Protein coding	CCDS23160	Q9JHJ5	TSL:1 Gencode basic APPRIS P1

The strategy is based on the design of *Htr3b-201* transcript, The transcription is shown below



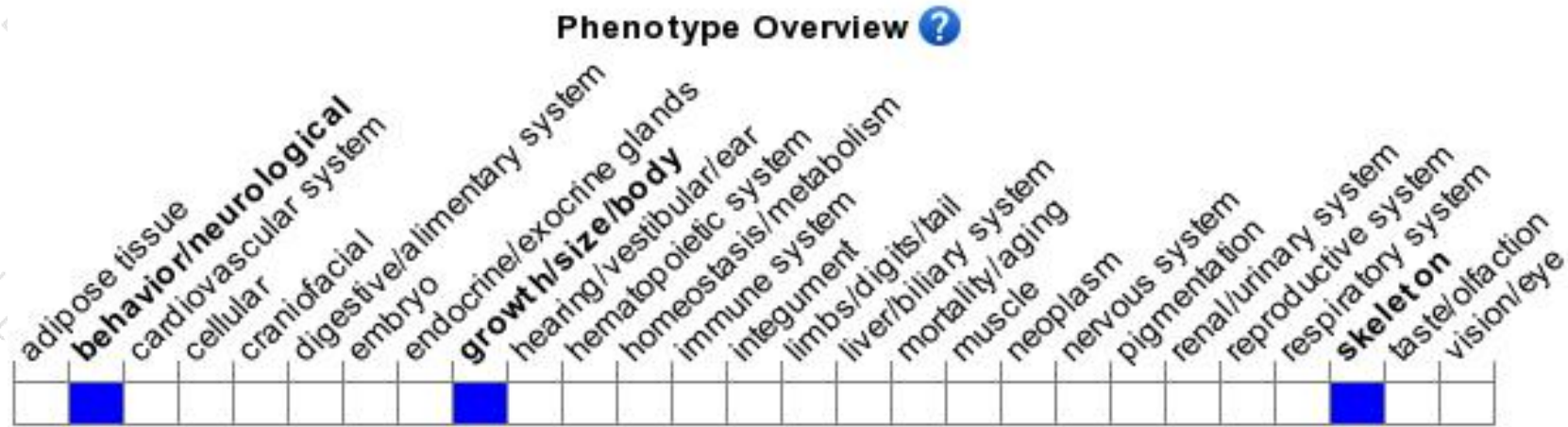
Genomic location distribution



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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