

Wdr60 Cas9-KO Strategy

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Project Overview

Project Name

Wdr60

Project type

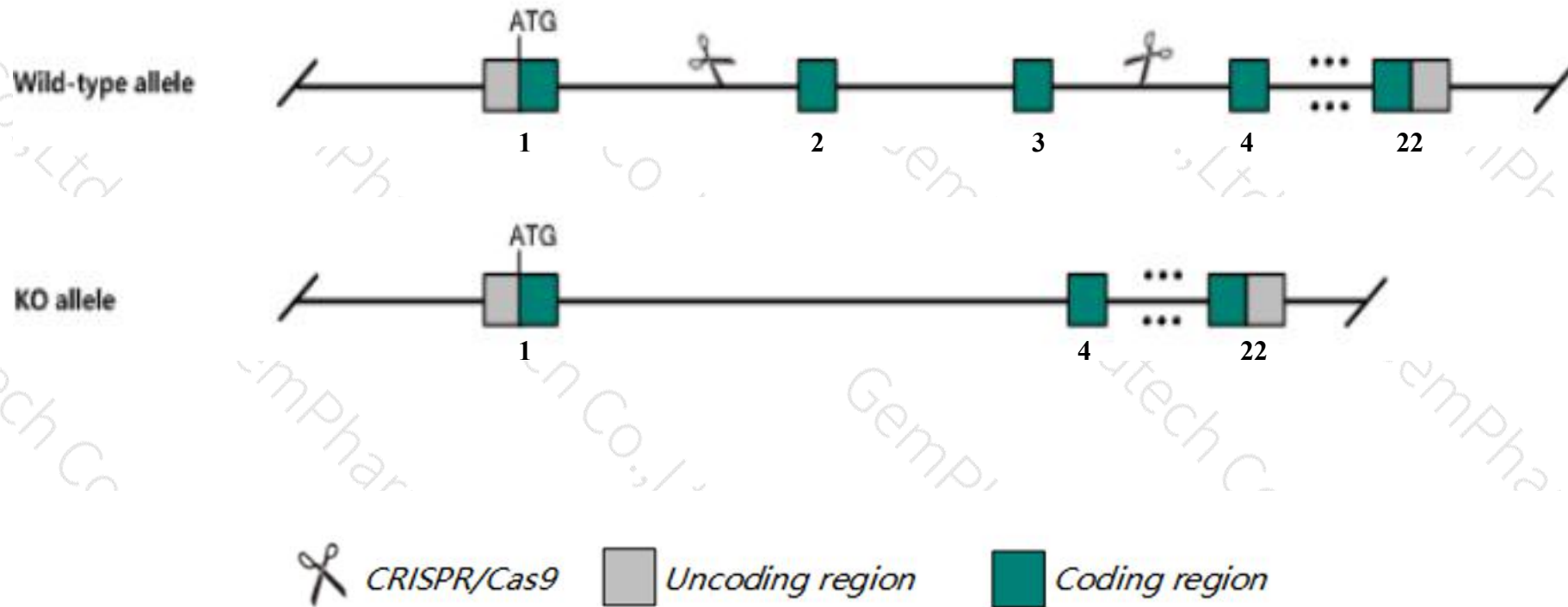
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Wdr60* gene. The schematic diagram is as follows:



- The *Wdr60* gene has 8 transcripts. According to the structure of *Wdr60* gene, exon2-exon3 of *Wdr60-201* (ENSMUST00000039349.7) transcript is recommended as the knockout region. The region contains 475bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Wdr60* gene. The brief process is as follows: CRISPR/Cas9 system

- The *Wdr60* gene is located on the Chr12. 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)

Wdr60 WD repeat domain 60 [*Mus musculus* (house mouse)]

Gene ID: 217935, updated on 4-Jun-2020

Summary



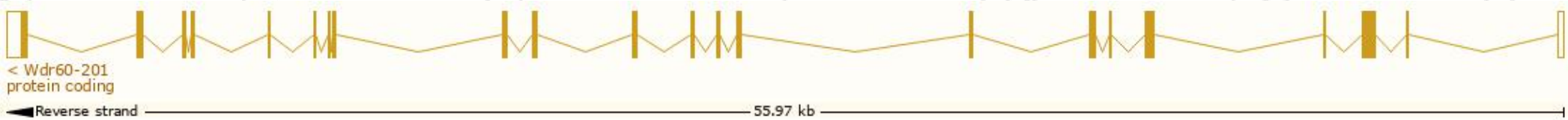
Official Symbol	Wdr60 provided by MGI
Official Full Name	WD repeat domain 60 provided by MGI
Primary source	MGI:MGI:2445085
See related	Ensembl:ENSMUSG00000042050
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	D430033N04Rik
Expression	Broad expression in testis adult (RPKM 6.3), frontal lobe adult (RPKM 3.7) and 21 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

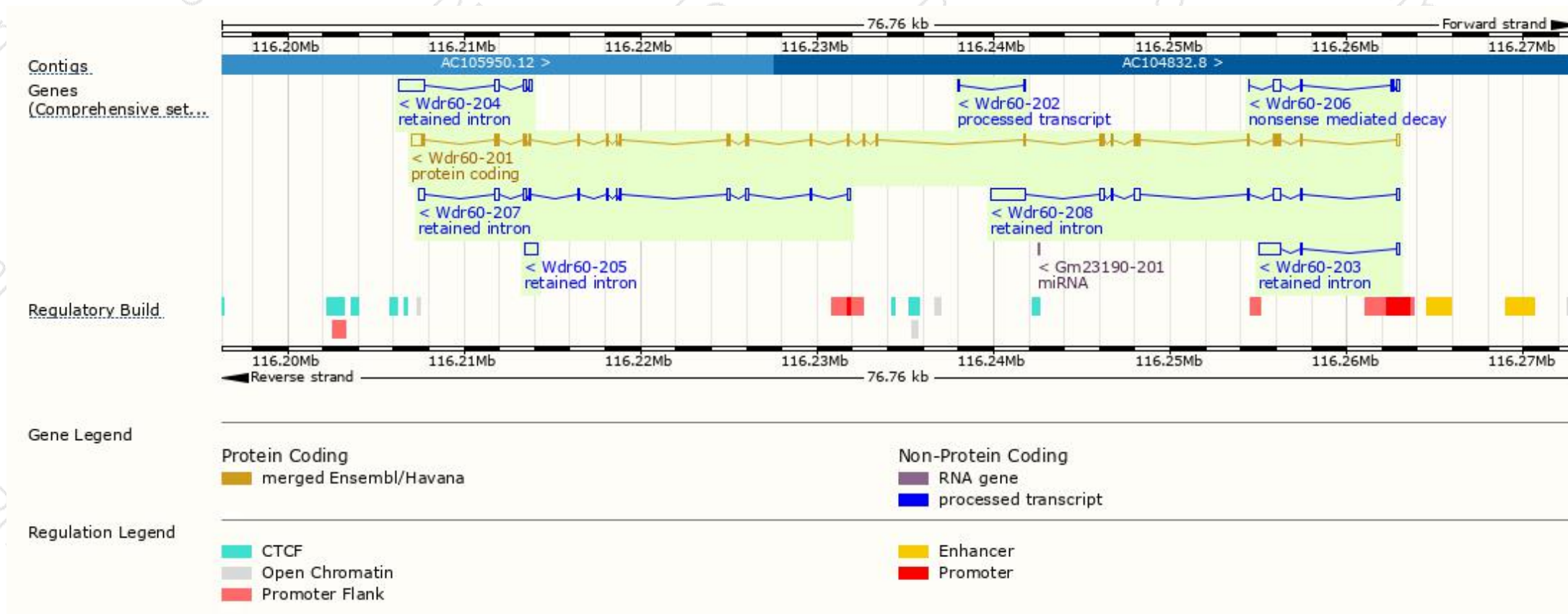
The gene has 8 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Wdr60-201	ENSMUST00000039349.7	3721	999aa	Protein coding	CCDS36575	Q8C761	TSL:1 GENCODE basic APPRIS P1
Wdr60-206	ENSMUST00000222679.1	765	45aa	Nonsense mediated decay	-	A0A1Y7VNH8	TSL:1
Wdr60-202	ENSMUST00000220761.1	194	No protein	Processed transcript	-	-	TSL:1
Wdr60-208	ENSMUST00000223039.1	3256	No protein	Retained intron	-	-	TSL:1
Wdr60-204	ENSMUST00000221748.1	2067	No protein	Retained intron	-	-	TSL:1
Wdr60-207	ENSMUST00000222764.1	1747	No protein	Retained intron	-	-	TSL:1
Wdr60-203	ENSMUST00000221029.1	1404	No protein	Retained intron	-	-	TSL:1
Wdr60-205	ENSMUST00000222539.1	732	No protein	Retained intron	-	-	TSL:NA

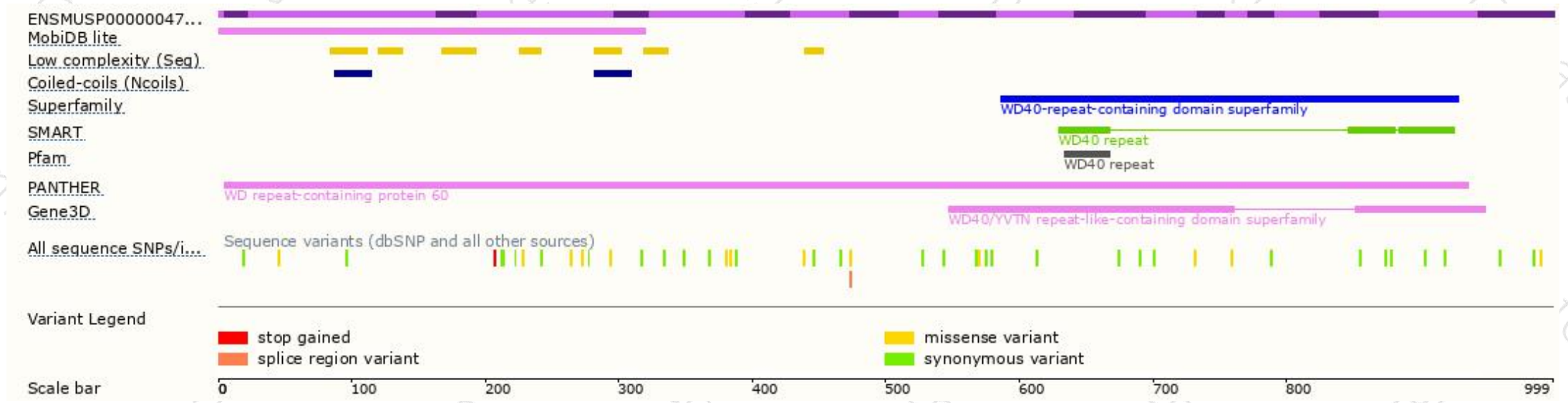
The strategy is based on the design of *Wdr60-201* transcript,the transcription is shown below:



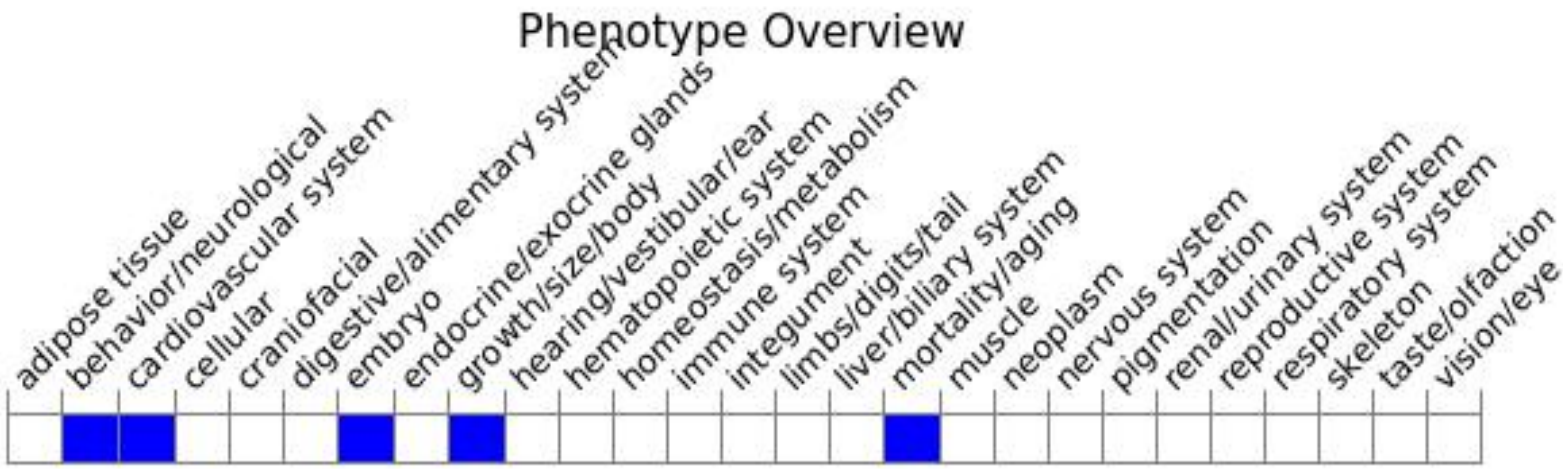
Genomic location distribution



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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