

Wdr73 Cas9-CKO Strategy

Designer:

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Project Overview

Project Name

Wdr73

Project type

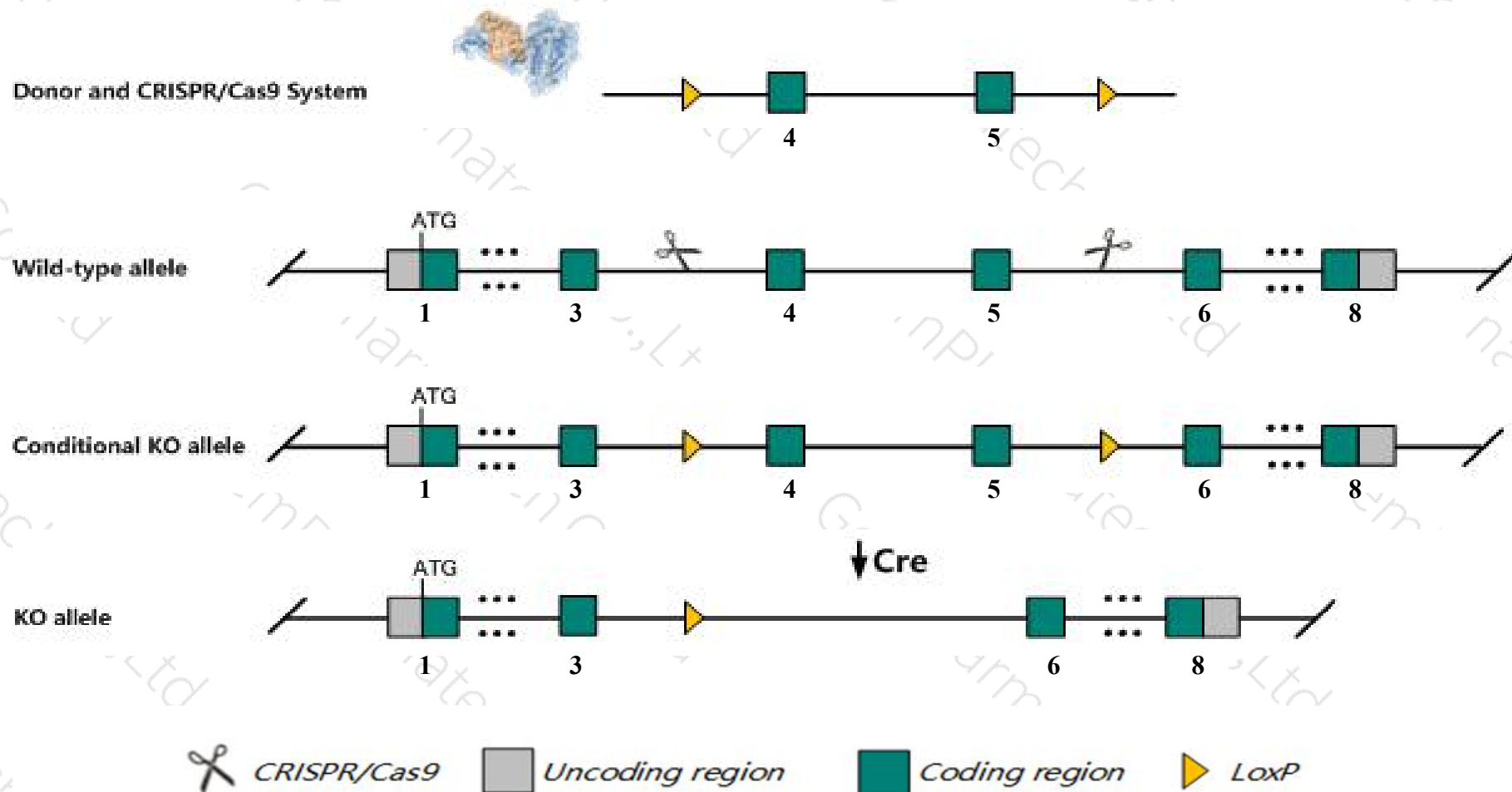
Cas9-CKO

Strain background

C57BL/6JGpt

Conditional Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Wdr73* gene. The schematic diagram is as follows:



- The *Wdr73* gene has 10 transcripts. According to the structure of *Wdr73* gene, exon4-exon5 of *Wdr73-201* (ENSMUST00000026816.14) transcript is recommended as the knockout region. The region contains 154bp coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Wdr73* gene. The brief process is as follows: CRISPR/Cas9 system and Donor were microinjected into the fertilized eggs of C57BL/6JGpt mice. Fertilized eggs were transplanted to obtain positive F0 mice which were confirmed by PCR and sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6JGpt mice.
- The flox mice will be knocked out after mating with mice expressing Cre recombinase, resulting in the loss of function of the target gene in specific tissues and cell types.

Notice

- The *Wdr73* gene is located on the Chr7. 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 loxp insertion on gene transcription, RNA splicing and protein translation cannot be predicted at existing technological level.

Gene information (NCBI)

Wdr73 WD repeat domain 73 [Mus musculus (house mouse)]

Gene ID: 71968, updated on 31-Jan-2019

Summary



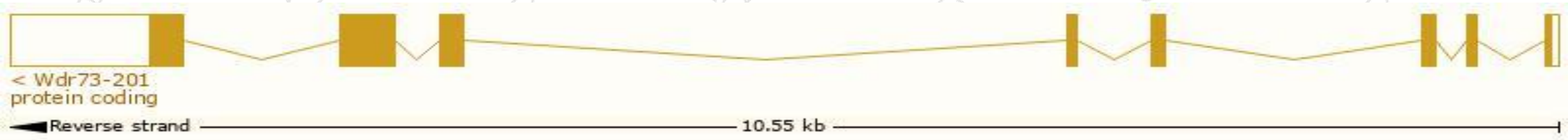
Official Symbol	Wdr73 provided by MGI
Official Full Name	WD repeat domain 73 provided by MGI
Primary source	MGI:MGI:1919218
See related	Ensembl:ENSMUSG000000025722
Gene type	protein coding
RefSeq status	VALIDATED
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	1200011I23Rik, 2410008B13Rik, AI848574, C85352
Expression	Ubiquitous expression in CNS E11.5 (RPKM 7.9), whole brain E14.5 (RPKM 7.6) and 28 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

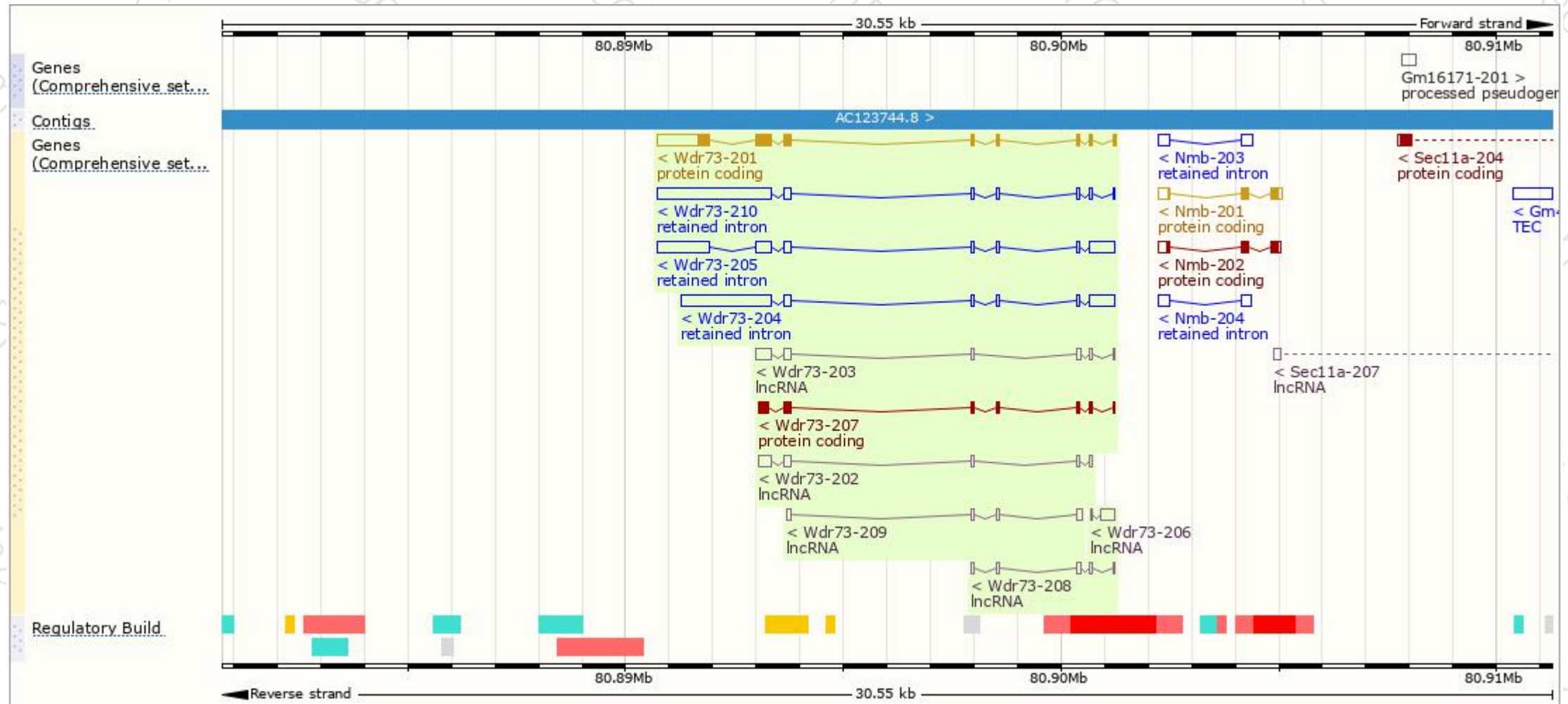
The gene has 10 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Wdr73-201	ENSMUST00000026816.14	2114	371aa	Protein coding	CCDS52282	Q9CWR1	TSL:1 Gencode basic APPRIS P1
Wdr73-207	ENSMUST00000146402.1	719	240aa	Protein coding	-	F6RXX6	CDS 5' and 3' incomplete TSL:3
Wdr73-210	ENSMUST00000152518.7	3142	No protein	Retained intron	-	-	TSL:1
Wdr73-204	ENSMUST00000135905.7	3080	No protein	Retained intron	-	-	TSL:1
Wdr73-205	ENSMUST00000139990.7	2549	No protein	Retained intron	-	-	TSL:1
Wdr73-203	ENSMUST00000133979.7	785	No protein	lncRNA	-	-	TSL:2
Wdr73-202	ENSMUST00000131651.7	676	No protein	lncRNA	-	-	TSL:3
Wdr73-209	ENSMUST00000147589.7	425	No protein	lncRNA	-	-	TSL:3
Wdr73-206	ENSMUST00000145923.1	376	No protein	lncRNA	-	-	TSL:3
Wdr73-208	ENSMUST00000147154.1	375	No protein	lncRNA	-	-	TSL:3

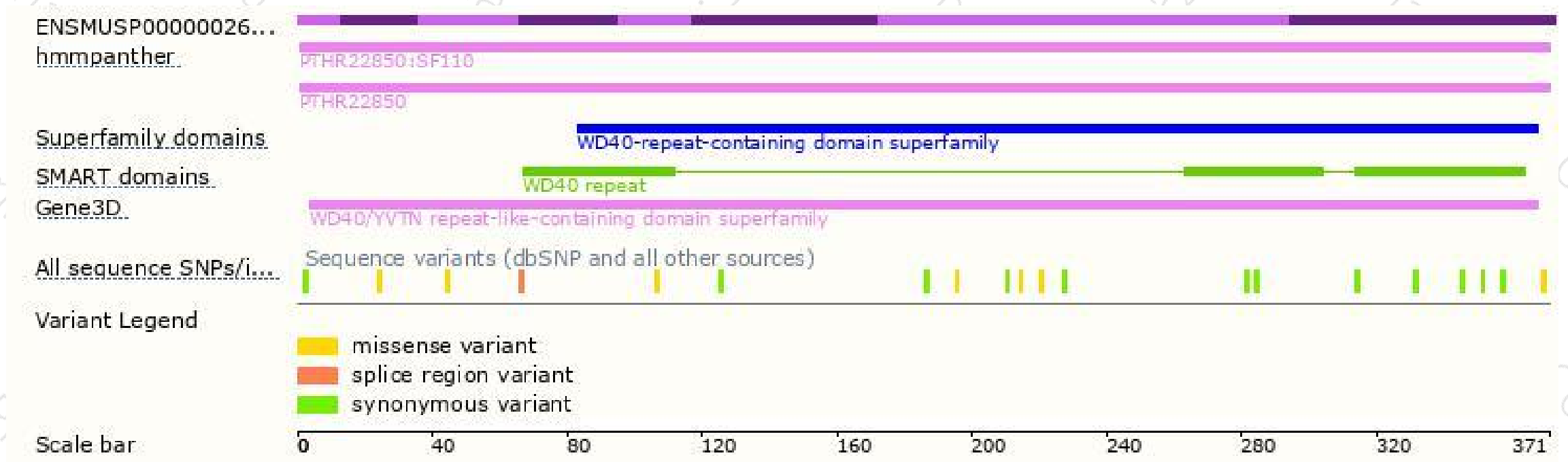
The strategy is based on the design of *Wdr73-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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