

Lurap1l Cas9-KO Strategy

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Reviewer :

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Project Overview



Project Name

Lurap1l

Project type

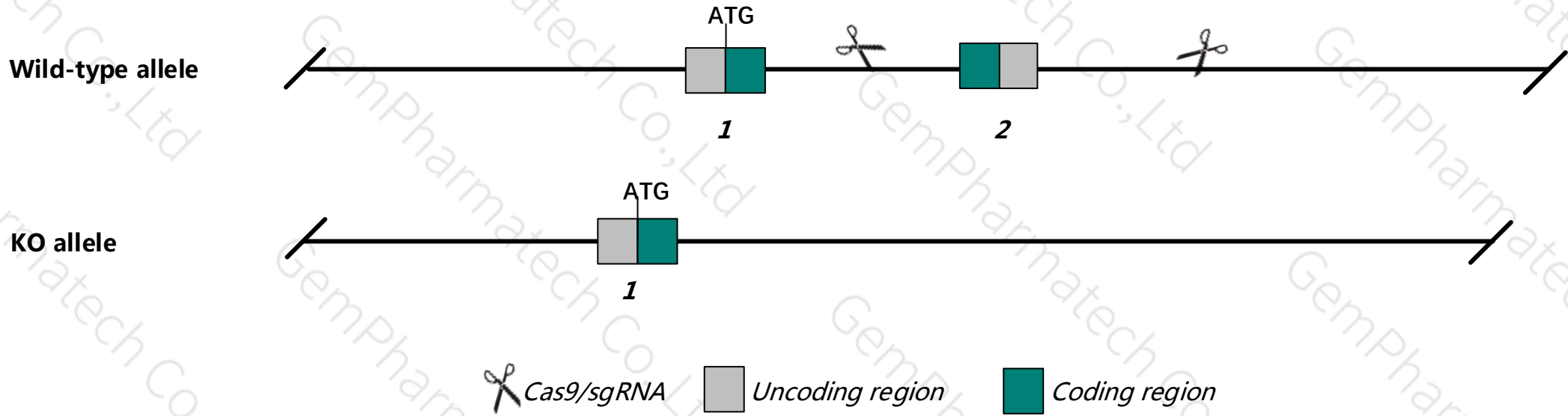
Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Lurap11* gene. The schematic diagram is as follows:



Technical routes

- The *Lurap11* gene has 1 transcript. According to the structure of *Lurap11* gene, exon2 of *Lurap11*-201 (ENSMUST00000055922.3) transcript is recommended as the knockout region. The region contains the important coding sequence. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Lurap11* gene. The brief process is as follows: sgRNA was transcribed in vitro. Cas9, sgRNA 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.

Notice

- The *Lurap11* gene is located on the Chr4. 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)



Lurap1l leucine rich adaptor protein 1-like [*Mus musculus* (house mouse)]

Gene ID: 52829, updated on 12-Aug-2019

Summary

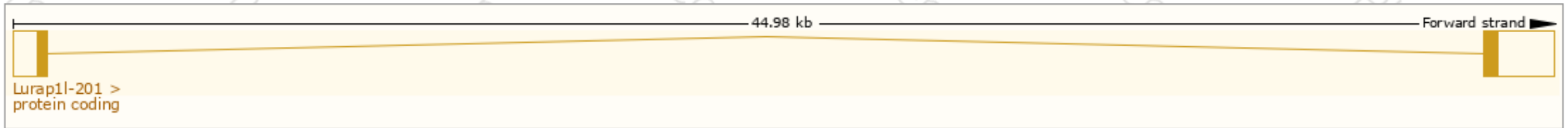
Official Symbol	Lurap1l provided by MGI
Official Full Name	leucine rich adaptor protein 1-like provided by MGI
Primary source	MGI:MGI:106510
See related	Ensembl:ENSMUSG00000048706
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	AV077978; AV175137; WI-13707; D4Bwg0951e; bM350F23.1; 1110029A09Rik
Expression	Broad expression in colon adult (RPKM 59.0), duodenum adult (RPKM 29.9) and 17 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

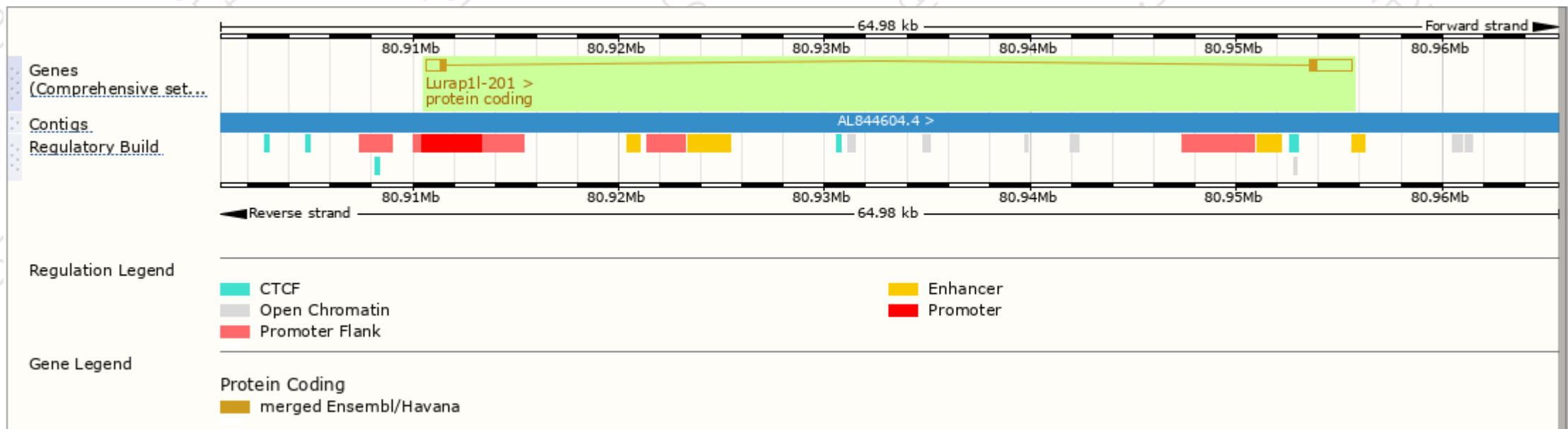
The gene has 1 transcript, and the transcript is shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
Lurap1l-201	ENSMUST00000055922.3	3066	221aa	Protein coding	CCDS18291	Q8K2P1	TSL:1 GENCODE basic APPRIS P1

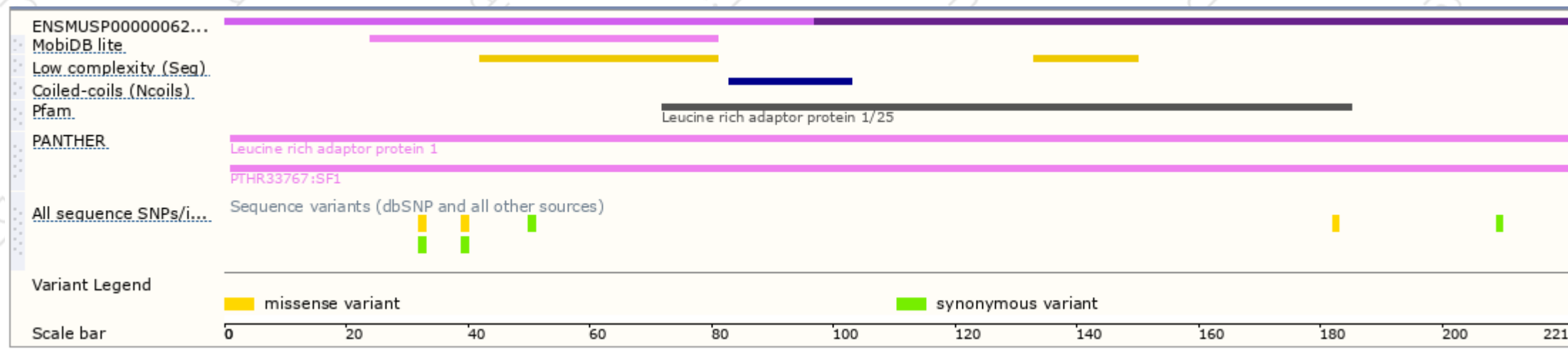
The strategy is based on the design of *Lurap1l-201* transcript, The transcription is shown below



Genomic location distribution



Protein domain



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