

Ell3 Cas9-KO Strategy

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Design Date:

2019-7-18

Project Overview

Project Name

Ell3

Project type

Cas9-KO

Strain background

C57BL/6JGpt

Knockout strategy

This model will use CRISPR/Cas9 technology to edit the *Ell3* gene. The schematic diagram is as follows:



- The *Ell3* gene has 3 transcripts. According to the structure of *Ell3* gene, exon2-exon7 of *Ell3-201* (ENSMUST00000028679.10) transcript is recommended as the knockout region. The region contains start codon ATG. Knock out the region will result in disruption of protein function.
- In this project we use CRISPR/Cas9 technology to modify *Ell3* gene. The brief process is as follows: CRISPR/Cas9 system w

- The *Ell3* gene is located on the Chr2. 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)

ElI3 elongation factor RNA polymerase II-like 3 [Mus musculus (house mouse)]

Gene ID: 269344, updated on 31-Jan-2019

Summary



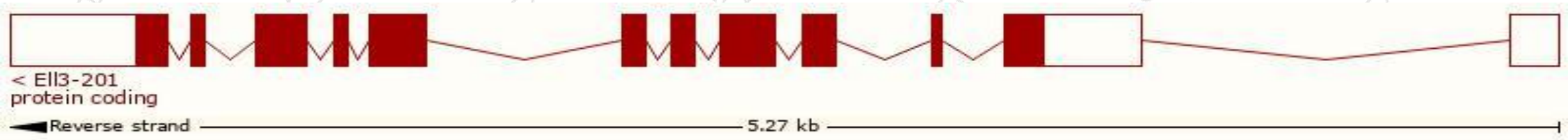
Official Symbol	ElI3 provided by MGI
Official Full Name	elongation factor RNA polymerase II-like 3 provided by MGI
Primary source	MGI:MGI:2673679
See related	Ensembl:ENSMUSG000000027246
Gene type	protein coding
RefSeq status	PROVISIONAL
Organism	Mus musculus
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Myomorpha; Muroidea; Muridae; Murinae; Mus; Mus
Also known as	A930015D22Rik
Expression	Broad expression in spleen adult (RPKM 10.8), kidney adult (RPKM 6.6) and 20 other tissues See more
Orthologs	human all

Transcript information (Ensembl)

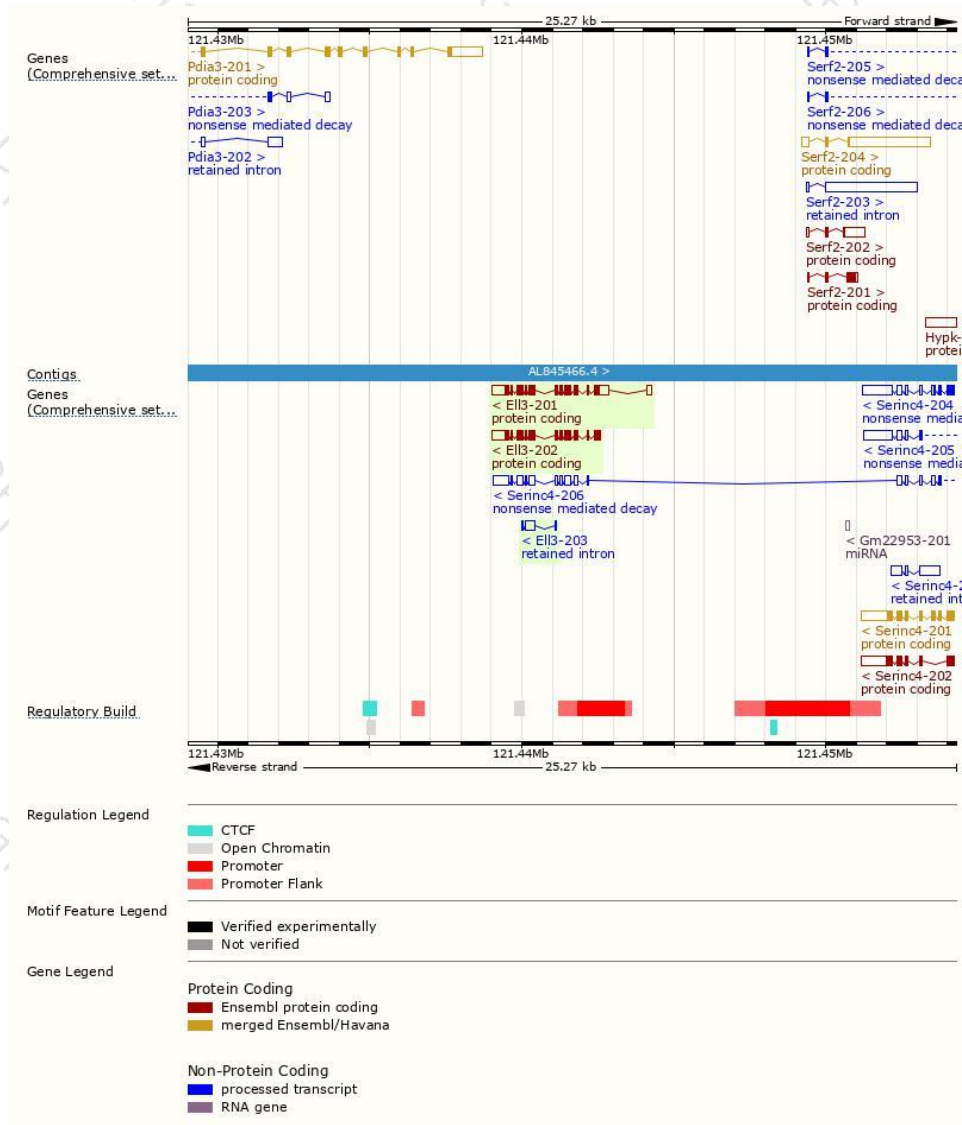
The gene has 3 transcripts,all transcripts are shown below:

Name	Transcript ID	bp	Protein	Biotype	CCDS	UniProt	Flags
EII3-201	ENSMUST00000028679.10	2115	395aa	Protein coding	CCDS16644	Q80VR2	TSL:1 GENCODE basic APPRIS P1
EII3-202	ENSMUST00000116432.1	1674	395aa	Protein coding	CCDS16644	Q80VR2	TSL:1 GENCODE basic APPRIS P1
EII3-203	ENSMUST00000153866.1	407	No protein	Retained intron	-	-	TSL:3

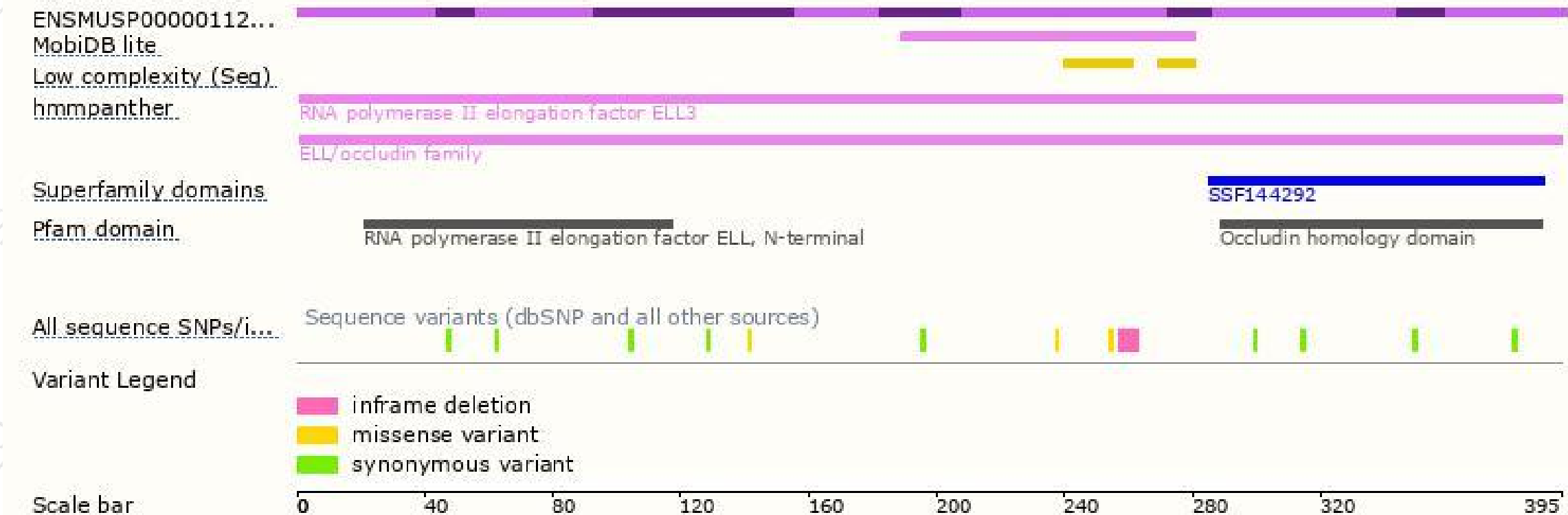
The strategy is based on the design of *EII3-201* transcript,The transcription is shown below



Genomic location distribution



Protein domain



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

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