



# Gene Editing Rat Resource Center

## Genotyping Your Model



Date:	04/06/2020		
Mutant Strain:	LE-Dyrk1a <sup>em3Mcwi</sup>	Mutant Strain RGD ID:	25394526
Gene Targeted:	Dyrk1a	RGD Gene ID:	2528
Parental Strain:	Long Evans	RGD Parental Strain ID:	2308852
Mutation Description:	5 bp del in exon 3		
Deletion:	GCGACGGTCA CTGTACTGat <b>gtg</b> AATGGGG (deletion in red)		
Insertion:	none		
Mutation Region:	(RGSC 6.0/rn6) chr11:34,922,239-34,922,243		
Target Site:	GGTCACTGTACTGATGTGAA		

### Sequencing Primers:

Forward:	CTTGGCTTGTGTGTTCCCAGG
Reverse:	CAAGGGCTGGGGAGAATCAG
WT PCR Size:	385 bp
Mutant Size:	380 bp

### Derivation Information:

This strain was produced by injecting a CRISPR targeting the sequences **GGTCACTGTACTGATGTGAA** into LE rat embryos. This allele was made by CRISPR mutagenesis. The resulting mutation is a 5-bp deletion in exon 3.

### Suggested Genotyping:

Fragment analysis to determine PCR product size. Another option is to design allele specific primers.

Funding Source:	
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Questions? Send an email to: [mcwcustomrats@mcw.edu](mailto:mcwcustomrats@mcw.edu)

**Additional Notes:** PCR

5.0  $\mu$ l of template (approximately 200ng)

12.5  $\mu$ l of Accuprime Supermix II (Invitrogen, Carlsbad, CA)

1.0  $\mu$ l of F primer at 10  $\mu$ M

1.0  $\mu$ l of R primer at 10  $\mu$ M

5.5  $\mu$ l of water

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25  $\mu$ L / rxn

PCR cycling parameters:

95°C- 5 min

35 cycles of:

95°C- 30 sec

60°C- 30 sec

68°C- 45 sec

68°C- 5 min

4°C- forever