Mouseline - Tmem160_em1_del

Submitted By: *Lauryl Nutter, 2015-08-06*
Last Updated By: *Joanna Joeng, 2016-07-19*
Status: *Modified*

Mouseline Summary

Common Name: *Tmem160_em1_del*
Official Nomenclature: *C57BL / 6N-Tmem160^{em1Tcp}*

Comments: *Founder 1359 from co-injection of Cas9 and gRNAs for three different genes. Intention is to segregate alleles and obtain three different single-gene knockout mouse lines from a single injection.*

Please use the following attribution in publications or presentations using this mouse line - The mouse line C57BL/6N-Tmem160<em1Tcp> was made as part of the KOMP2 project at The Centre for Phenogenomics. It was obtained from the Canadian Mouse Mutant Repository.

Contact Information

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Nomenclature

Genetically Modified: *Yes*
Originating PI name: *Lauryl Nutter*
Imported From Institute: *The Centre for Phenogenomics*
Strain Background: *C57BL / 6NCrl*
Strain Type: *Mutant Strain*
Subtype: *Mutant*

Welfare

Welfare Assessment: *No Welfare Concerns*
Potential Welfares:

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Allele 1: Tmem160^{em1Tcp}

Genetic Modification Type: *Endonuclease Mediated (EM)*
Allele Name: *Tmem160; endonuclease-mediated 1, The Centre for Phenogenomics*
Original Strain Background: *C57BL / 6NCrl*
Originating PI: *KOMP2*
Originating Institute: *The Centre for Phenogenomics*

Description of Mutation: *This allele, from project TCPR0363, was generated at The Centre for Phenogenomics by injecting Cas9 mRNA and two guide RNAs with spacer sequences AGTGTCCGAGCTGGATCGCG and ACTTCTGTCATCCGGCATTG. This resulted in a 1,033 bp deletion from Chr7:16453129 to 16454161 & 16 bp deletion from Chr7:16454205 to 16454221, from within exons ENSMUSE00000384664 and ENSMUSE00000198013, removing the splice donor site from the distal exon. This mutation is predicted to cause a frameshift with amino acid changes after residue 57 and early truncation 5 amino acids later (p.R57Wfs*7).*

Comments:

Endonuclease Mediated (EM)

Endonuclease Type: *CAS9-RGN (Cas9 RNA guided nuclease)*
Sequence Recognition Site(s): *AGTGTCCGAGCTGGATCGCG*
Sequence Recognition Site(s): *ACTTCTGTCATCCGGCATTG*
Sequence Recognition Site(s):
Sequence Recognition Site(s):
Sequence Recognition Site(s):
Repair Template Sequence(s):
Repair Template Sequence(s):

Mutation Description & Allele Details

MGI Information:

MGI Gene Name: *transmembrane protein 160*
MGI Gene Symbol: *Tmem160*
MGI Gene Accession ID #: *MGI:1916344*

MGI Allele Name: *Tmem160; endonuclease-mediated 1, The Centre for Phenogenomics*
MGI Allele Symbol: *Tmem160^{em1Tcp}*
MGI Allele Accession ID #: -

Genotyping Assay *(1)*

Assay Name: *Tmem - Nutter*

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Investigator: *Colin McKerlie*

Screening Protocol
PCR Protocol... Please see PCR and Primer sections below

PCR

Annealing Temp: 60ÂºC	**Final Mg Conc (mM): KAPA**	**Final dNTP Conc: KAPA**
# Cycles: 35	**Mg Type: KAPA**	**Primer Conc: 0.5 ÂµM**

Comments: ***KAPA HotStart mouse genoytping kit.***
95Â°C 3 min.;
[95Â°C 15 sec., 60Â°C 15 sec., 72Â°C 20sec.] x 35;
72Â°C 1 min.;
hold at 8Â°C
Note: Reaction conditions have not be optimized for multiplex PCR. Each primer pair is run separately.

Primer Set 1
Description: *wild-type*
Band Size: *478 bp*
Sequence Fwd: *ATGTGACCTCCAGCCTACAGTAG*
Sequence Rev: *GACCCGAAAGATGGTGTCCTATG*
Comments: *A: Tmem160_wt_F1; B: Tmem160_wt_R1*
Band present in wild-type and heterozygotes; absent in homozygotes.

Primer Set 2
Description: *em1*
Band Size: *432; 1463 bp*
Sequence Fwd: *ATGTGACCTCCAGCCTACAGTAG*
Sequence Rev: *GATGAAGGAGGTGTAAGAGGAGATG*
Comments: *A: Tmem160_wt_F1; B: Tmem160_em_R1*
Larger band present in wild-type and absent in homozygotes; both bands present in heterozygotes; smaller band present in homozygotes and absent in wild-type.

Other Information

Any other relevant information: