

**B6.129S6-*Ptpn11*<sup>tm6Bgn</sup>/Mmjax**

MMRRC Stock No: **32103-JAX**

 Congenic, Targeted Mutation

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protein tyrosine phosphatase, non-receptor type 11 (*Ptpn11*) gene and may be useful in generating conditional mutations to study cardiac defects, fatal myeloproliferative disorder (MPD) and juvenile myelomonocytic leukemia (JMML).

### Donating Investigator

Benjamin Neel, NYU School of Medicine

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## GENETIC OVERVIEW

Genetic Background

Generation

*Ptpn11*<sup>tm6Bgn</sup>

**Alele Type**

Targeted (Conditional ready (e.g. floxed), No functional change)

**Gene Symbol**

*Ptpn11*

**Gene Name**

protein tyrosine phosphatase, non-receptor type 11

VIEW GENETICS

## RESEARCH APPLICATIONS

Research Tools

VIEW ALL RESEARCH APPLICATIONS

## Details

### Detailed Description

Mice that are homozygous for the targeted mutation are not viable. When used in conjunction with a Cre recombinase-expressing strain, this strain is useful in generating tissue-specific mutants of the floxed allele. This mutant mouse strain may be useful in generating conditional mutations to study cardiac defects, fatal myeloproliferative disorder (MPD) and juvenile myelomonocytic leukemia (JMML).

When bred to a strain expressing Cre recombinase in endothelial cells (Tg(Tek-cre)12Flv), this mutant mouse strain may be useful in studies of the cardiac defects found in Noonan syndrome.

When bred to a strain expressing Cre recombinase in epiblast-derived tissues ( $Meox2^{tm1(cre)Sor}$ ), this mutant mouse strain may be useful in studies of cardiac defects.

When bred to a strain expressing tamoxifen-inducible Cre recombinase in most tissues (Tg(CAG-cre/Esr1\*)5Amc), this mutant mouse strain may be useful in studies of hematopoiesis.

When bred to a strain expressing interferon-inducible Cre recombinase in most tissues (Tg(Mx1-cre)1Cgn), this mutant mouse strain may be useful in studies of fatal myeloproliferative disorder and juvenile myelomonocytic leukemia (JMML).

When bred to a strain expressing Cre recombinase in neural tube, spinal cord and areas of the brain (Tg(Wnt1-cre)11Rth), this mutant mouse strain may be useful in studies of craniofacial defects.

When bred to a strain expressing Cre recombinase in the early mouse embryo (Tg(Ella-cre)C5379Lmgd), this mutant mouse strain may be useful in studies of myeloproliferative disorders.

*In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.*

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### + Development

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### + Control Suggestions

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### + Selected References

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## Genetics

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### + $Ptpn11^{tm6Bgn}$

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## – Disease/Phenotype

+ [Disease Terms](#)

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+ [Research Areas By Phenotype](#)

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+ [Mammalian Phenotype Terms by Genotype](#)

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+ [References](#)

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## – Technical Support

C O N T A C T   T E C H N I C A L   S U P P O R T

### Genotyping Protocols

Sanger sequencing:[Ptpn11 \(exon 3\)](#)

[Genotyping resources and troubleshooting](#)

### Breeding Considerations

While maintaining a live colony, these mice are bred as heterozygotes. Mice homozygous for the mutation are not viable.

[Additional Breeding and Husbandry Support](#)

### Citation

When using the B6.129S6-*Ptpn11*<sup>tm6Bgn</sup>/Mjax mouse strain in a publication, please [cite the originating article\(s\)](#) and include MMRRC stock #32103 in your Materials and Methods section.

### Animal Health Reports

[Facility Barrier Level Descriptions](#)

*Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200*

## THE JACKSON LABORATORY'S GENOTYPE PROMISE

The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. **Therefore, we cannot guarantee a strain's phenotype will meet all expectations.** To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee [breeding performance](#) and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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### LICENSING INFORMATION

Phone: 207-288-6470

Email: [TechTran@jax.org](mailto:TechTran@jax.org)

## Related Strains

All

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