Retinal degeneration 10 (rd10) is a spontaneous missense point mutation in \textit{Pde6b} (cGMP phosphodiesterase 6B, rod receptor, beta polypeptide). Although similar to \textit{rd1}, the \textit{rd10} phenotype has a later onset and milder retinal degeneration and may provide a better experimental drug therapy model for retinitis pigmentosa.

**GENETIC OVERVIEW**

- **Genetic Background**: 000664 C57BL/6J
- **Generation**: N6F15 (2020-04-23 00:00:00)

**Pde6b^rd10**

- **Allele Type**: Spontaneous
- **Gene Symbol**: \textit{Pde6b}
- **Gene Name**: phosphodiesterase 6B, cGMP, rod receptor, beta polypeptide

**RESEARCH APPLICATIONS**

Sensorineural Research

**BASE PRICE**

Starting at: $151.83 Domestic price for female
Detailed Description

Pde6b (cGMP phosphodiesterase 6B, rod receptor, beta polypeptide) encodes the beta subunit of phosphodiesterase (PDE), a peripheral membrane enzyme involved in the phototransduction cascade in rod photoreceptors. Mutations in PDE are associated with retinitis pigmentosa and night blindness. Mice homozygous for retinal degeneration 10 (rd10) exhibit sclerotic retinal vessels at 4 weeks of age, progressive retinal outer nuclear layer degeneration beginning at 16 days, and a progressive decline in rod and cone ERG a- and b- waves. Retinal degeneration is delayed by approximately a week in mice raised in total darkness. Although similar to rd1, the rd10 phenotype has a later onset and milder retinal degeneration and may provide a better experimental drug therapy model for retinitis pigmentosa.

Development

Control Suggestions

Genetics

Pde6b<sup>rd10</sup>

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support
Genotyping Protocols
Sanger sequencing: Pde6b
Genotyping resources and troubleshooting

Mating System
Homozygote x Homozygote
Appearance
black
Related Genotype: a/a
Citation
When using the B6.CXB1-Pde6b<rd10>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #004297 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

MGL277 (Low)

Pricing & Availability

Availability
Varies

Domestic and International
Pricing effective for USA, Canada and Mexico shipping destinations

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Pde6b&lt;rd10&gt;</td>
<td>$151.83</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Pde6b&lt;rd10&gt;</td>
<td>$151.83</td>
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Related Products and Services

Frozen Mouse Embryo
B6.CXB1-Pde6b<rd10>/J Frozen Embryos
$2595.00

Payment Terms and Conditions
Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are
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General Terms and Conditions

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Phone: 207-288-6470
Email: TechTran@jax.org

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Related Strains

All

By Allele

By Gene

By Collection

All Related Strains