Phenotypes associated with this allele

Allele Symbol	**Pde6b^{rd10}**
Allele Name	retinal degeneration 10
Allele ID	MGI:2388259
Summary	1 genotype

Jump to	Allelic Composition	Genetic Background	Genotype ID
hm1	Pde6b^{rd10}/Pde6b^{rd10}	B6.CXB1-Pde6b^{rd10}/J	MGI:3581193

Genotype MGI:3581193 hm1

Allelic Composition: Pde6b^{rd10}/Pde6b^{rd10}

Genetic Background: B6.CXB1-Pde6b^{rd10}/J

Find Mice: Using the International Mouse Strain Resource (IMSR)
Mouse lines carrying:
Pde6b^{rd10} mutation (1 available); any Pde6b mutation (121 available)

♀	phenotype observed in females
♂	phenotype observed in males
N	normal phenotype

vision/eye

vision/eye phenotype (J:122722)
N

abnormal retinal vasculature morphology (J:122722)
- sclerotic retinal vessels are observed at 4 weeks of age

abnormal retinal rod cell morphology (J:122722)

retinal rod cell degeneration (J:122722)
- rod photoreceptor cells start degenerating in the central retina at 16 days of age and in the peripheral retina at 20 days of age
- by 60 days of age no photoreceptors remain

retinal outer nuclear layer degeneration (J:122722)
- histological analyses show progressive retinal outer nuclear layer degeneration (ONL) beginning in the center at 16 days of age and spreading to the periphery by 20 days of age

retinal degeneration (J:117305 , J:122722)
- tauroursodeoxycholic acid slows onset of degeneration of retinal outer nuclear layers and photoreceptors (J:117305)
- clinical abnormalities are observable at 4 weeks of age (J:122722)
- histological analyses show progressive retinal outer nuclear layer degeneration (ONL) beginning in the center at 16 days of age and spreading to the periphery by 20 days of age (J:122722)
- by 60 days of age no ONL remains (J:122722)
- nuclei counts in the ONL over time reflects progressive degeneration; inner nuclear layers are not affected (J:122722)
- dark-reared mice showed no degeneration until 24 days of age with initial nuclei loss apparent at 30 days (J:122722)

abnormal eye electrophysiology (J:117305 , J:122722)
- ERG a- and b- wave amplitudes are greater in mice treated with tauroursodeoxycholic acid (J:117305)
- mice showed reduced rod and cone responses under both dark- and light-adapted conditions compared to wild-type (J:122722)
- a small a-wave appeared only at the brightest flash intensity indicating loss of sensitivity in dark-adapted, 30 day old mice (J:122722)
- the loss of cone function was not registered as fast by b-wave response from light-adapted compared to dark-adapted mice (J:122722)

cardiovascular system

abnormal retinal vasculature morphology (J:122722)
- sclerotic retinal vessels are observed at 4 weeks of age

nervous system

abnormal retinal rod cell morphology (J:122722)

retinal rod cell degeneration (J:122722)
- rod photoreceptor cells start degenerating in the central retina at 16 days of age and in the peripheral retina at 20 days of age
- by 60 days of age no photoreceptors remain

Mouse Models of Human Disease	DO ID	OMIM ID(s)	Ref(s)
retinitis pigmentosa	DOID:10584	OMIM:PS268000	J:122722