For Research Use Only

RD3 Polyclonal antibody

Catalog Number:14855-1-AP

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Antibodies | ELISA kits | Proteins
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Basic Information

Catalog Number:
14855-1-AP

Size:
850 ug/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG6641

GenBank Accession Number:
BC065541

GeneID (NCBI):
343035

UNIPROT ID:
Q7Z3Z2

Full Name:
retinal degeneration 3

Calculated MW:
22.7 kDa

Observed MW:
23 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:3000
IHC 1:50-1:500

Applications

Tested Applications:
WB, IHC, ELISA

Species Specificity:
human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : mouse retina tissue, rat retina tissue

IHC : rat eye tissue, mouse eye tissue

Background Information

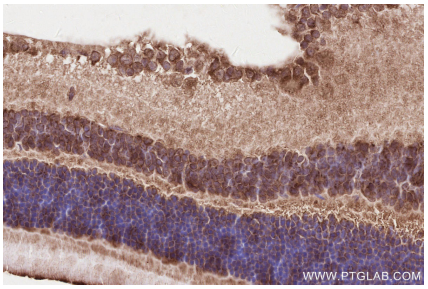
RD3, or Retinal Degeneration 3, plays a critical role in regulating guanylate cyclase (GC) signaling and photoreceptor cell survival (PMID: 30559291). RD3 is highly conserved across vertebrates, with the human protein sharing high sequence identity with other primates and varying degrees of identity with other species (PMID: 29030614). The main functions of RD3 include inhibiting photoreceptor-specific guanylate cyclase activity and promoting the accumulation of retinal membrane guanylyl cyclase (RetGC) in the photoreceptor outer segment (PMID: 30559291). RD3 is essential for the normal expression of RetGC in photoreceptor cells and blocks RetGC catalytic activity. Mutations in the RD3 gene can lead to Leber congenital amaurosis type 12, which results in retinal degeneration. RD3 is also involved in the trafficking of RetGC from the endoplasmic reticulum to the photoreceptor outer segments, which is crucial for maintaining the normal function and survival of photoreceptors (PMID: 34537244).

Storage

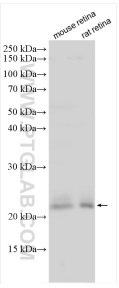
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

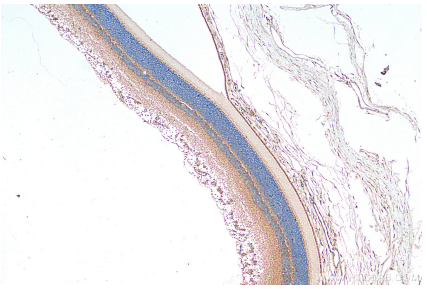
Selected Validation Data



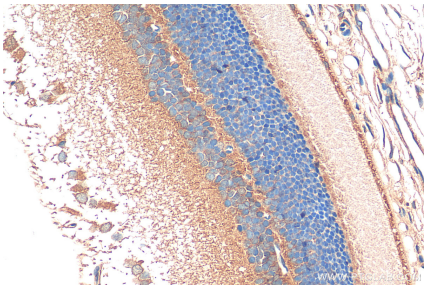
Immunohistochemical analysis of paraffin-embedded mouse eye tissue slide using 14855-1-AP (RD3 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Various lysates were subjected to SDS PAGE followed by western blot with 14855-1-AP (RD3 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded rat eye tissue slide using 14855-1-AP (RD3 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded rat eye tissue slide using 14855-1-AP (RD3 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).