Product Datasheet

Rhodopsin Antibody (B630) - BSA Free
NBP2-25160

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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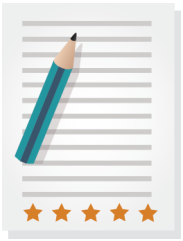
Updated 2/23/2025 v.20.1



NBP2-25160

Rhodopsin Antibody (B630) - BSA Free

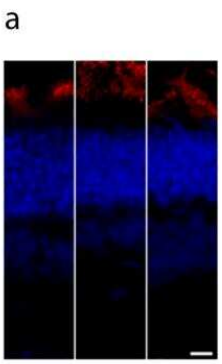
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	B630
Preservative	0.035% Sodium Azide
Isotype	IgG1
Purity	Protein G purified
Buffer	50% PBS, 50% glycerol
Target Molecular Weight	35 kDa

Product Description	
Host	Mouse
Gene ID	6010
Gene Symbol	RHO
Species	Human, Mouse, Rat, Porcine, Bovine, Canine, Equine
Reactivity Notes	Canine reactivity reported in scientific literature (PMID: 30889179).
Immunogen	Purified rhodopsin from bovine retina.

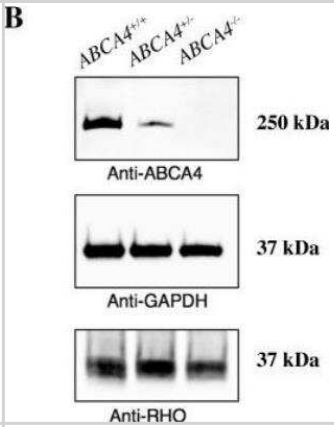
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1:5000, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:1000
Application Notes	This Rhodopsin (B630) antibody is useful for Immunocytochemisty/Immunofluorescence, Immunohistochemistry, and Western Blot, where a band can be seen at ~35 kDa.

Images

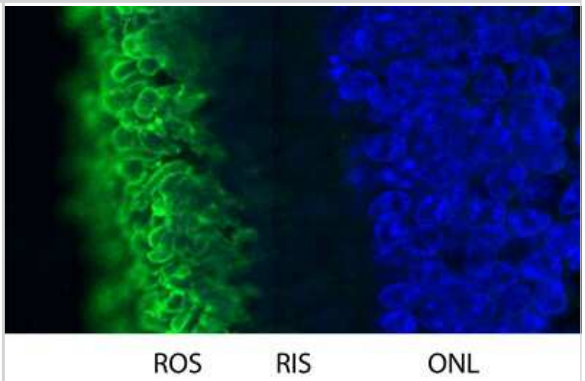
Immunohistochemistry: Rhodopsin Antibody (B630) [NBP2-25160] - Rhodopsin expression and the prevalence of rod photoreceptors in the canine retina. (A) Fluorescence micrographs showing rhodopsin expression (red) in the ABCA4+/+ (left), ABCA4+/- (middle), and ABCA4 -/- (right) rod outer segments. Scale bar = 10 um. Image collected and cropped by CiteAb from the following publication (doi.org/10.1371/journal.pgen.1007873) licensed under a CC-BY license.



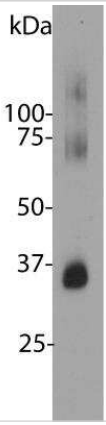
Western Blot: Rhodopsin Antibody (B630) [NBP2-25160] - Western blot analyses of ABCA4 (above), GAPDH (middle), and RHO (below) protein levels in retinal tissue of dogs with the three different genotypes. Image collected and cropped by CiteAb from the following publication. 50 ug of protein samples were resolved by SDS-PAGE, transferred to nitrocellulose membrane, and immunoblotted with the following primary antibodies: ABCA4 (NBP1-30032, 1:1000) and Rhodopsin (NBP2-25160, 1:5000), followed by Anti-Mouse IgG horseradish peroxidase-conjugated secondary antibody (R&D Systems, HAF007, 1:5000. Image collected and cropped by CiteAb from the following publication (doi.org/10.1371/journal.pgen.1007873) licensed under a CC-BY license.



Immunocytochemistry/Immunofluorescence: Rhodopsin Antibody (B630) [NBP2-25160] - High magnification confocal image of pig retinal section stained with NBP2-25160 (Green). Rhodopsin is most abundant in the rod outer segments (ROS) of retina, clearly localized in rod membranes. The rod inner segments (RIS) and rod nuclei in the outer nuclear layer (ONL) are also seen in this image. Nuclear DNA was stained with DAPI (blue).



Western Blot: Rhodopsin Antibody (B630) [NBP2-25160] - Blot of bovine retinal extracts. The antibody stains a band corresponing to retinal Rhodopsin at about 35kDa. Bands about 70 kDa and 140 kDa are aggregated forms of Rhodopsin. Note, due to the highly hydrophobic nature of Rhodopsin, it is important to avoid boiling samples containing this protein in SDS-PAGE sample buffer, as this will result in even more extensive aggregation of the Rhodopsin protein and appearance of more of this high molecular weight material.



Publications

Huang M, Chow CH, Gurdita A et Al. SNAP-25, but not SNAP-23, is essential for photoreceptor development, survival, and function in mice Commun Biol 2024-01-05 [PMID: 38182732]

Saumil Sethna, Patrick A. Scott, Arnaud P. J. Giese, Todd Duncan, Xiaoying Jian, Sheikh Riazuddin, Paul A. Randazzo, T. Michael Redmond, Steven L. Bernstein, Saima Riazuddin, Zubair M. Ahmed CIB2 regulates mTORC1 signaling and is essential for autophagy and visual function Nature Communications 2021-06-23 [PMID: 34162842]

Chen C, Liu Q, Rong Y et al. ZC3H11A mutations cause high myopia by triggering PI3K-AKT and NF-?B mediated inflammatory reactions in humans and mice bioRxiv 2023-08-30 (IHC, Mouse)

Chen C, Rong Y, Zhuang Y et al. RNA-Seq Analysis Reveals an Essential Role of the cGMP-PKG-MAPK Pathways in Retinal Degeneration Caused by Cep250 Deficiency International Journal of Molecular Sciences 2023-05-16 [PMID: 37240188] (Immunohistochemistry, Functional Assay)

Li M, Xu J, Wang Y et al. Astragaloside A Protects Against Photoreceptor Degeneration in Part Through Suppressing Oxidative Stress and DNA Damage-Induced Necroptosis and Inflammation in the Retina Journal of Inflammation Research 2022-05-20 [PMID: 35645574] (Immunohistochemistry, Immunohistochemistry-Frozen)

Vargas JA, Finnemann SC Differences in Diurnal Rhythm of Rod Outer Segment Renewal between 129T2/SvEmsJ and C57BL/6J Mice International journal of molecular sciences 2022-08-22 [PMID: 36012733] (IHC-WhMt, Mouse)

MAkelAinen S, Hellsand M, van der Heiden A et al. Deletion in the Bardet-Biedl Syndrome Gene TTC8 Results in a Syndromic Retinal Degeneration in Dogs Genes (Basel) 2020-09-23 [PMID: 32962042]

Mao Y, Finnemann SC Acute RhoA/Rho Kinase Inhibition Is Sufficient to Restore Phagocytic Capacity to Retinal Pigment Epithelium Lacking the Engulfment Receptor MerTK Cells 2021-07-29 [PMID: 34440696]

Bullock J, Polato F, Abu-Asab M et al. Degradation of Photoreceptor Outer Segments by the Retinal Pigment Epithelium Requires Pigment Epithelium-Derived Factor Receptor (PEDF-R) Investigative ophthalmology & visual science 2021-02-01 [PMID: 33605986] (WB, Human)

Makelainen, S;Godia, M;Hellsand, M;Viluma, A;Hahn, D;Makdoumi, K;Zeiss, CJ;Mellersh, C;Ricketts, SL;Narfstrom, K;Hallbook, F;Ekesten, B;Andersson, G;Bergstrom, TF; An ABCA4 loss-of-function mutation causes a canine form of Stargardt disease PLoS Genet. 2019-03-01 [PMID: 30889179] (ICC/IF, WB, Canine)

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Products Related to NBP2-25160

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)
NBP2-55553PEP	Rhodopsin Recombinant Protein Antigen

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