ARG11145
anti-Rhodopsin antibody [B630]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [B630] recognizes Rhodopsin
Tested Reactivity	Hu, Ms, Rat, Cow, Hrs, Pig
Tested Application	ICC/IF, IHC-Fr, WB
Host	Mouse
Clonality	Monoclonal
Clone	B630
Isotype	IgG1
Target Name	Rhodopsin
Species	Bovine
Immunogen	Purified bovine rhodopsin.
Conjugation	Un-conjugated
Alternate Names	Rhodopsin; Opsin-2; CSNBAD1; RP4; OPN2

Application Instructions

Application table

Application	Dilution
ICC/IF	1:1000
IHC-Fr	1:1000
WB	1:5000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Observed Size: ~ 33 kDa

Properties

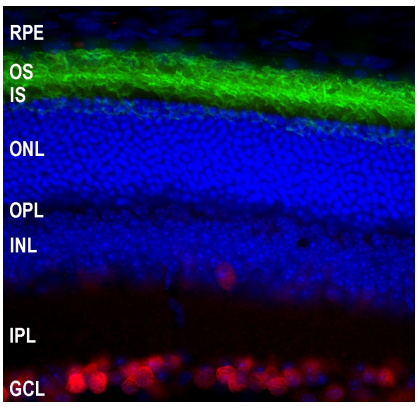
Form	Liquid
Purification	Purified
Buffer	PBS, 5 mM Sodium azide and 50% Glycerol.
Preservative	5 mM Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

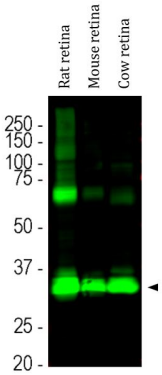
Gene Symbol	RHO
Gene Full Name	rhodopsin
Background	The protein encoded by this gene is found in rod cells in the back of the eye and is essential for vision in low-light conditions. The encoded protein binds to 11-cis retinal and is activated when light hits the retinal molecule. Defects in this gene are a cause of congenital stationary night blindness. [provided by RefSeq, Aug 2017]
Function	Photoreceptor required for image-forming vision at low light intensity (PubMed:8107847, PubMed:7846071). Required for photoreceptor cell viability after birth (PubMed:2215617, PubMed:12566452). Light-induced isomerization of the chromophore 11-cis-retinal to all-trans-retinal triggers a conformational change that activates signaling via G-proteins (PubMed:8107847, PubMed:28524165, PubMed:26200343, PubMed:28753425). Subsequent receptor phosphorylation mediates displacement of the bound G-protein alpha subunit by the arrestin SAG and terminates signaling (PubMed:28524165, PubMed:26200343). [UniProt]
Calculated Mw	39 kDa
PTM	Phosphorylated on some or all of the serine and threonine residues present in the C-terminal region. Contains one covalently linked retinal chromophore. [UniProt]
Cellular Localization	Membrane; Multi-pass membrane protein. Cell projection, cilium, photoreceptor outer segment. Note=Synthesized in the inner segment (IS) of rod photoreceptor cells before vectorial transport to disk membranes in the rod outer segment (OS) photosensory cilia. [UniProt]

Images



ARG11145 anti-Rhodopsin antibody [B630] IHC-Fr image

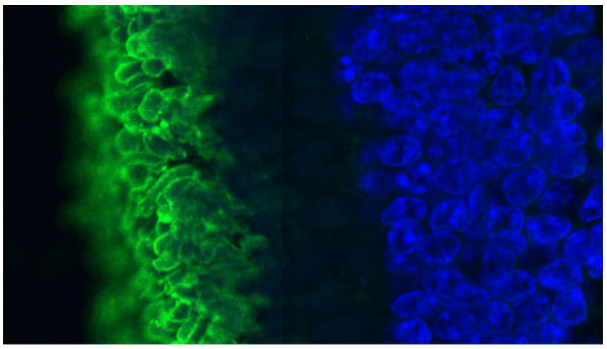
Immunohistochemistry: Frozen section of Mouse retina tissue stained with ARG11145 anti-Rhodopsin antibody [B630] (green) at 1:2000 dilution, and co-stained with ARG10712 anti-FOX3 / NeuN antibody (red) at 1:5000 dilution. Hoechst (blue) for nuclear staining.



ARG11145 anti-Rhodopsin antibody [B630] WB image

Western blot: Rat retina, Mouse retina and Cow retina lysates stained with ARG11145 anti-Rhodopsin antibody [B630] at 1:5000 dilution.

The strong band at 35 kDa corresponds to rhodopsin protein. Bands at about 70 kDa and 140 kDa are presumably aggregated forms of rhodopsin.



ARG11145 anti-Rhodopsin antibody [B630] IHC-Fr image

Immunohistochemistry: Frozen section of Pig retinal tissue stained with ARG11145 anti-Rhodopsin antibody [B630] (green). Hoechst (blue) for nuclear staining.

Rhodopsin is most abundant in the rod outer segments (ROS) of retina, clearly localized in rod cell membranes. The rod inner segments (RIS) and rod nuclei in the outer nuclear layer (ONL) are also seen in this image.