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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-Rhodopsin Antibody [4D2]

Mouse Anti-Bovine Rhodopsin Monoclonal IgG1
Catalog No. SMC-176

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

Rhodopsin Antibody

Description

Mouse Anti-Bovine Rhodopsin Monoclonal IgG1

Species Reactivity

Amphibians, Anchovies, Avian, Extinct Spiny Shark (Acanthodes bridgei), Fish, Mammals, Shark

Applications

WB, IHC, ICC/IF, IP, ELISA

Antibody Dilution

WB (1:1000), IHC (1000); optimal dilutions for assays should be determined by the user.

Host Species

Mouse

Immunogen Species

Bovine

Immunogen

Bovine Rhodopsin

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Storage Temperature

-20ºC

Shipping Temperature

Blue Ice or 4ºC

Purification

Protein G Purified

Clonality

Monoclonal

Clone Number

4D2

Isotype

IgG1

Specificity

Detects ~40kDa. Binds specifically to the N-terminus of Rhodopsin. Does not detect Rhodopsin in invertebrates.

Cite This Product

Mouse Anti-Bovine Rhodopsin Monoclonal, Clone 4D2 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-176)

Certificate Of Analysis

1 µg/ml of SMC-176 was sufficient for detection of rhodopsin in 10 µg of rat eye lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

OPN2 Antibody, opsd Antibody, opsin 2 Antibody, opsin 2 rod pigment Antibody, opsin2 Antibody, RHO Antibody, RP4 Antibody, MGC138309 Antibody, Retinitis Pigmentosa 4 Antibody

Research Areas

Cell Signaling, Neuroscience, Neurotransmitter Receptors, Rhodopsin

Cellular Localization

Membrane

Accession Number

NP_001014890.1

Gene ID

509933

Swiss Prot

P02699

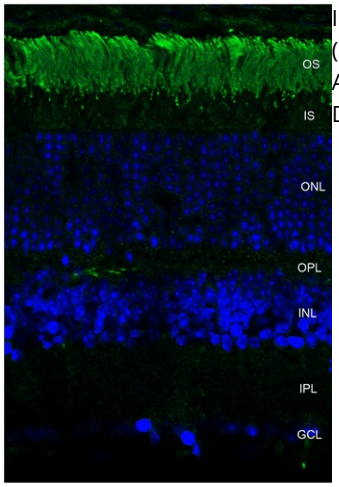
Scientific Background

Rhodopsin consists of the protein moiety opsin and a reversibly covalently bound cofactor, retinal. Opsin, a bundle of seven membrane embedded alpha-helices, binds retinal, a photo reactive chromophore, in a central pocket (2, 3). In addition to being the pigment of the retina that is responsible for both the formation of the photoreceptor cells, its function is to specifically convey information stored in the specific geometry of the chormophore to the surface of the molecule upon light absorption (2). In the active state, rhodopsin activates transduction, a GTP binding protein. Once activated, transduction promotes the hydrolysis of cGMP by phosphodiesterase. Rhodopsins activity is believed to be shut off by its phosphorylation followed by binding of the soluble protein arrestin (4).
Mutations in the rhodopsin gene lead to retinitis pigmentosa, which can be inherited as an autosomal dominant, an autosomal recessive or an X-linked recessive disorder (5).

References

1. Molday R.S., Hicks D., and Molday L. (1987) Invest Ophthalmol Vis Sci. 28: 50-61.
2. Ridge K.D., Lee S.S.J., and Abdulaev N.G. (1996) J of Biol Chem. 271: 7860-7867.
3. Matsuyama T., Yamashita T., Imai H. and Shichida Y. (2009) J Biol Chem. Manuscript M109.063875.
4. Feurstein S.E., et al. (2009) Biochemistry. 48(45): 10733-10742.
5. Iannaccone A., et al. (2006) Vision Res. 46(27): 4556-4567.

Product Images



Immunohistochemistry analysis using Mouse Anti-Rhodopsin Monoclonal Antibody, Clone 4D2 (SMC-176). Tissue: retina. Species: Mouse. Primary Antibody: Mouse Anti-Rhodopsin Monoclonal Antibody (SMC-176) at 1:1000. Secondary Antibody: FITC Goat Anti-Mouse (green). Counterstain: DAPI (blue) nuclear stain. Localization: Staining of photoreceptor outer segment (OS).

Product Citations (1)

Immunohistochemistry

Mineralized rods and cones suggest colour vision in a 300?Myr-old fossil fish.

Tanaka, G. et al. -2014 Nature Commun. 23;5:5920.

PubMed ID: 25536302 **Reactivity:** Acanthodes bridgei (fish) **Applications:** Immunohistochemistry

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences
June 14, 2016: