

Anti-Rhodopsin Monoclonal Antibody

Catalog Number: M00083-1

Introduction

CD3epsilon is a 20kD chain, which together with CD3lambda, CD3delta, and CD3zeta, and a T cell receptor (alpha/beta or gamma/delta) form the CD3/T-cell receptor complex. It is a specific marker for T lymphocytes, NK T cells, and some thymocytes. Crosslinking of TCR initiates an intracellular signaling cascade resulting in cellular activation and proliferation. The OKT3 antibody has been reported to have potent immunosuppressive properties in vivo and has been proved effective in the treatment of renal, heart, and liver allograft rejection.

This antibody is routinely tested by flow cytometric analysis. Flow cytometry and other applications were tested during antibody development or are reported in the literature.

Application Information

Each lot of this antibody has been pre-titrated and tested by flow cytometric analysis of human PBMCs such that 2-5µl of this product is sufficient for staining of 1 million cells in a 100µl staining volume or 100µl of whole blood. This biotin conjugated antibody can be easily detected by any fluorochrome conjugated streptavidin. It is recommended that antibody reactivity be empirically titrated for optimal performance in the application of interest.

About RHO

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 chromophore 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. Rhodopsin's 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).

Overview

Product Name	Anti-Rhodopsin Monoclonal Antibody
Reactive Species	Mammals, Amphibians, Fish, Shark, Avian
Description	Boster Bio Anti-Rhodopsin Monoclonal Antibody catalog # M00083-1. Tested in ELISA, IP, IHC applications. This antibody reacts with Human, Mouse, Rat.
Conjugate	HRP
Application	ELISA, IP, IF, IHC, ICC, WB
Clonality	Monoclonal 4D2
Formulation	PBS pH7.4, 50% glycerol, 0.09% sodium azide

Storage Instructions	Store at -20°C for one year. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P02699

Technical Details

Immunogen	Bovine Rhodopsin
Predicted Reactive Species	Bovine, Mammalian
Cross Reactivity	Detects ~40kDa. Binds specifically to the N-terminus of Rhodopsin. Does not detect Rhodopsin in invertebrates.
Isotype	IgG1
Form	liquid
Concentration	1 mg/ml
Purification	Protein G Purified
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>WB (1:1000), IHC (1000); optimal dilutions for assays should be determined by the user.</p>

Anti-Rhodopsin Monoclonal Antibody (M00083-1) Images

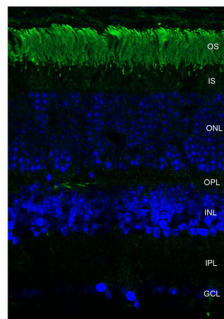


Figure 1. IHC analysis of RHO using anti-RHO antibody (M00083-1).

RHO was detected in paraffin-embedded section. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-RHO Antibody (M00083-1) overnight at 4°C. Biotinylated goat anti Mouse IgG antibody was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

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