ARG52417
anti-Rhodopsin antibody [1D4]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [1D4] recognizes Rhodopsin
Tested Reactivity	Hu, Ms, Rat, Amph, Cow, Mamm, Zfsh
Predict Reactivity	Rb
Tested Application	ELISA, ICC/IF, IHC-FoFr , IHC-Fr, IHC-P, IP, WB
Specificity	The antibody reacts to C- terminal epitope TETSQVAPA- (COOH) of rhodopsin, so it also reacts to C9 tag (TETSQVAPA).
Host	Mouse
Clonality	Monoclonal
Clone	1D4
Isotype	IgG1
Target Name	Rhodopsin
Species	Bovine
Immunogen	Purified native bovine rhodopsin
Epitope	Antibody binds to the C- terminal epitope-T-E-T-S-Q-V-A-P-A- (COOH) of rhodopsin.
Conjugation	Un-conjugated
Alternate Names	Rhodopsin; Opsin-2; CSNBAD1; RP4; OPN2

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
ICC/IF	1:1000
IHC-FoFr	1:1000
IHC-Fr	Assay-dependent
IHC-P	1:100 - 1:1000
IP	Assay-dependent
WB	1:1000

Application Note

Specific for the ~ 39k rhodopsin protein.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

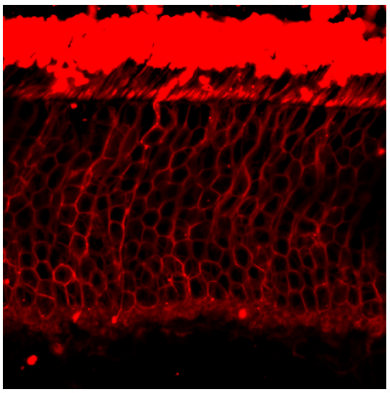
Properties

Form	Liquid
Purification	Protein G purified
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 0.1 mg/ml BSA and 50% Glycerol
Stabilizer	0.1 mg/ml BSA, 50% Glycerol
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	Rhodopsin is a photoreceptor protein found in retinal rods. It is a complex formed by the binding of retinaldehyde, the oxidized form of retinol, to the protein opsin and undergoes a series of complex reactions in response to visible light resulting in the transmission of nerve impulses to the brain. Mutation of the rhodopsin gene is a major contributor to various retinopathies such as retinitis pigmentosa. The disease-causing protein generally aggregates with ubiquitin in inclusion bodies, disrupts the intermediate filament network and impairs the ability of the cell to degrade non-functioning proteins which leads to photoreceptor apoptosis (Berson et al., 1991). Other mutations on rhodopsin lead to X-linked congenital stationary night blindness, mainly due to constitutive activation, when the mutations occur around the chromophore binding pocket of rhodopsin (Dryja et al.,1993). Several other pathological states relating to rhodopsin have been discovered including poor post-Golgi trafficking, dysregulative activation, rod outer segment instability and arrestin binding.
Research Area	Neuroscience antibody; Signaling Transduction antibody
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.

Images



ARG52417 anti-Rhodopsin antibody [1D4] IHC image

Immunohistochemistry:Immunofluorescence: adult mouse retinal section stained with anti-rhodopsin antibody (ARG52417)