

Product Datasheet

Alpha B Crystallin Antibody: RPE (orb147488)

Description	Mouse monoclonal to Alpha B Crystallin (RPE). The alpha-crystallins are major water-soluble lens structural proteins of the vertebrate eye that are related to the small heat shock protein family. The alpha-crystallins possess structural and functional similarities with Hsp25 and Hsp27. Mammalian lens crystallins are divided into alpha, beta and gamma families. Alpha and beta families are further divided into acidic and basic groups (Alpha-A and Alpha-B respectively). In the lens, alpha-crystallin primarily functions to maintain proper refractive index, however it can also function as a molecular chaperone that binds to the denatured proteins, keeping them in solution and thereby maintaining the translucency of the lens. When cellular stress occurs, alpha-crystallin enters its phosphorylated state and may serve a structural control function and play a role in protein maintenance. In addition to their interaction with proteins, alpha-crystallins also interact with native molecules such as membrane proteins, Golgi matrix protein, structural proteins, nuclear proteins and DNA (3, 4, 5, 6, and 7). Two other functions are an autokinase activity and participation in the intracellular architecture, and it has also been proven that both alpha-A and B prevent apoptosis by inhibiting caspases. Specifically, alpha-B crystallin is found in many cells and organs outside the lens, and alpha B is overexpressed in several neurological disorders and in cell lines under stress conditions..
Species/Host	Mouse
Reactivity	Bovine, Human, Porcine, Rat
Conjugation	RPE
Tested Applications	ICC, IF, IHC, WB
Immunogen	Native Alpha B Crystallin
Target	Alpha B Crystallin
Preservatives	95.64mM Phosphate, 2.48mM MES and 2mM EDTA
Concentration	1 mg/ml

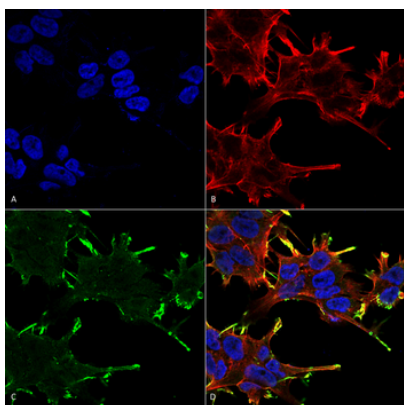
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Storage	Conjugated antibodies should be stored according to the product label
Note	For research use only
Application notes	0.5 µg/ml of SMC-159 was sufficient for detection of 50 ng purified alpha B crystalline by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.
Isotype	IgG1
Clonality	Monoclonal
Clone Number	1A7.D5
MW	21kDa
Uniprot ID	P02511
NCBI	NP_001876.1
Entrez	1410
Dilution Range	WB (1:2000), ICC/IF (1:100)
Expiration Date	12 months from date of receipt.



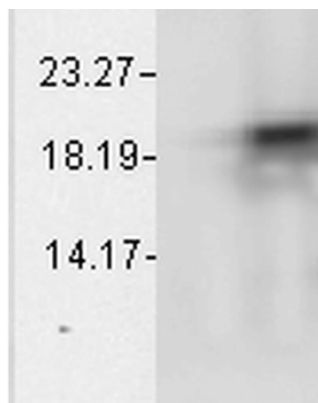
Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Alpha B Crystallin Monoclonal Antibody, Clone 1A7.D5. Tissue: Neuroblastoma cell line (SK-N-BE). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-Alpha B Crystallin Monoclonal Antibody at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000, 1:5000 for 60min RT, 5min RT. Localization: Membrane. Magnification: 60X. (A) DAPI (blue) nuclear stain. (B) Phalloidin Texas Red F-Actin stain. (C) Alpha B Crystallin Antibody. (D) Composite.

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Western Blot analysis of Bovine cell lysates showing detection of Alpha B Crystallin protein using Mouse Anti-Alpha B Crystallin Monoclonal Antibody, Clone 1A7.D5. Load: 15 μ g. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Alpha B Crystallin Monoclonal Antibody at 1:50 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

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