

## Product Datasheet

### Alpha A Crystallin Antibody (HRP) (orb147264)

**Catalog Number** orb147264

**Category** Antibodies

**Description** Mouse monoclonal to Alpha A Crystallin (HRP). 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..

**Target** Alpha A Crystallin

**Clonality** Monoclonal

**Species/Host** Mouse

**Isotype** IgG1

**Conjugation** HRP

**Reactivity** Bovine, Human, Mouse, Rat

**Concentration** 1 mg/ml

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<b>Buffer/Preservatives</b>	73.64mM Carbonate, 54.55mM Ethanolamine, 45.45mM Cyanoborohydride, 18.18mM Sodium Hydroxide 0.23mM Citrate
<b>Purification</b>	Protein G Purified
<b>Immunogen</b>	Native Alpha Crystallin
<b>UniProt ID</b>	<b>P02489</b>
<b>MW</b>	20kDa
<b>Tested applications</b>	ELISA, ICC, IF, WB
<b>Dilution range</b>	WB (1:2000), ICC/IF (1:100)
<b>Application notes</b>	0.5 µg/ml was sufficient for detection of 100 ng purified alphaA crystalline by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:HRP as the secondary.
<b>Specificity</b>	Detects ~20kDa. Does not cross-react with αB-crystallin, βL-crystallin, BH-crystallin, γ-crystallin, HSP25, HSP27 or HSP47 proteins.
<b>Clone Number</b>	1H3.B8
<b>Storage</b>	Conjugated antibodies should be stored according to the product label
<b>Note</b>	For research use only
<b>Entrez</b>	<b>1409</b>
<b>NCBI</b>	<b>NP_000385.1</b>

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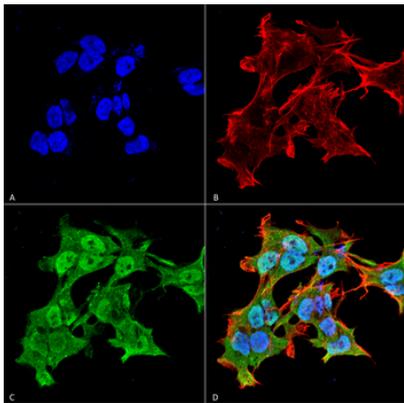
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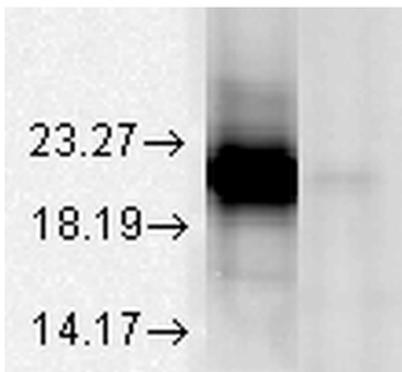
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Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Alpha A Crystallin Monoclonal Antibody, Clone 1H3.B8. Tissue: Neuroblastoma cell line (SK-N-BE). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-Alpha A 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: Cytoplasm. Magnification: 60X. (A) DAPI (blue) nuclear stain. (B) Phalloidin Texas Red F-Actin stain. (C) Alpha A Crystallin Antibody. (D) Composite.



Western Blot analysis of Bovine tissue lysate showing detection of Alpha A Crystallin protein using Mouse Anti-Alpha A Crystallin Monoclonal Antibody, Clone 1H3.B8. Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Alpha A Crystallin Monoclonal Antibody at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT. This blot shows absolute specificity as Left: Alpha A Crystallin, Right: Alpha B Crystallin.

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