

Mouse Alpha A Crystallin Monoclonal Antibody | anti-CRYAA antibody

Alpha A Crystallin Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA253932	Mouse	Human, Mouse, Rat, Bovine	Immunofluorescence, Immunocytochemistry, ELISA, Western Blot

PRODUCT SYNONYMS

Alpha A Crystallin; Monoclonal Antibody; Alpha A Crystallin Antibody; Mouse Anti-Human Alpha A Crystallin Monoclonal IgG1; Clone 1H3.B8; Heat shock protein beta4 Antibody; Acry 1 Antibody; CRYA1 Antibody; CRYAA Antibody; HSPB4 Antibody; anti-CRYAA antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Mouse, Rat, Bovine
Clonality	Monoclonal
Isotype	IgG1
Clone Number	1H3.B8
Specificity	Detects ~20kDa. Does not cross-react with alphaB-crystallin, betaL-crystallin, betaH-crystallin, gamma-crystallin, HSP25, HSP27 or HSP47 proteins.
Purity/Purification	Protein G Purified
Form/Format	PBS pH 7.2, 50% glycerol, 0.09% Sodium Azide
Concentration	1 mg/ml (varies by lot)
Sequence Length	173
Applicable Applications for anti-CRYAA antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA, WB (Western Blot)
Immunogen	Native Alpha Crystallin
Immunogen Species	Human
Conjugate	Unconjugated
Cellular Localization	Cytoplasm, Nucleus
Certificate of Analysis	0.5 ug/ml was sufficient for detection of 100 ng purified alphaA crystalline by colorimetric immunoblot analysis using Goat Anti-Mouse IgG:HRP as the secondary.
Preparation and Storage	Store at -20 degree C.

IMAGES



WB (Western Blot)

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 ug. 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.



ICC (Immunocytochemistry)

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.

ADDITIONAL INFORMATION

Related Product Information for anti-CRYAA antibody	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 (1). 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 (2). 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 (8).
Product Categories/Family for anti-CRYAA antibody	Cancer; Heat Shock; Cell Signaling; Protein Trafficking; Chaperone Proteins; Neuroscience
References	1. Merck K.B. et al. (1993) J Biol Chem. 268: 1046-1052. 2. Horwitz J. (1992) Proc Natl Acad Sci USA 89(21): 10449-10453. 3. Cobb B.A. and Petrash J.M. (2002) Biochemistry. 41: 483-490 4. Horwitz J. (2003) Exp Eye Res. 76: 145-153. 5. Bullard B. et al. (2004) J Biol Chem. 279: 7917-7924. 6. Gangalum R.K., Schibler M.J. and Bhat S.P. (2004) J Biol Chem. 279: 43374.43377. 7. Maddala R. and Rao V.P. (2005) Exp Cell Res. 306: 203-215. 8. Yang J., et al. (2007) Molecular Vision 13: 566-577.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4503055
NCBI GeneID	1409
NCBI Accession #	NP_000385.1
NCBI GenBank Nucleotide #	NM_000394.3
UniProt Accession #	P02489
NCBI Official Full Name	alpha-crystallin A chain isoform 1
NCBI Official Synonym Full Names	crystallin alpha A
NCBI Official Symbol	CRYAA
NCBI Official Synonym Symbols	CRYA1; HSPB4; CTRCT9
NCBI Protein Information	alpha-crystallin A chain
UniProt Protein Name	Alpha-crystallin A chain
UniProt Gene Name	CRYAA
UniProt Synonym Gene Names	CRYA1; HSPB4; HspB4

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/alpha-a-crystallin-antibody-clone-1h3-b8-immunofluorescence-immunocytochemistry-western-blot-elisa/253932>