Rabbit alpha B Crystallin Polyclonal Antibody | anti-CRYAB antibody

Alpha B Crystallin Antibody: ATTO 488

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA103628	**Rabbit**	**Human, Mouse, Rat, Bovine, Chicken**	**Immunofluorescence, Immunocytochemistry, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

alpha B Crystallin; Polyclonal Antibody; Alpha B Crystallin Antibody: ATTO 488; AACRYA; Alpha crystallin B chain; CRYA2; CRYAB; CTPP2; HspB5; NY REN 27 antigen; anti-CRYAB antibody

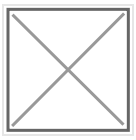
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat, Bovine, Chicken
Clonality	Polyclonal
Specificity	Detecs ~22kDa, does not cross react with ?A-crystillin.
Purity/Purification	Affinity purified
Form/Format	PBS pH 7.4, 50% glycerol , 0.09% sodium azide.
Concentration	1mg/mL (varies by lot)
Sequence Length	175
Applicable Applications for anti-CRYAB antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), IHC (Immunohistochemistry), WB (Western Blot)
Conjugate	ATTO 488
Immunogen	Synthetic peptide corresponding to human alpha B crystallin conjugated to KLH.
Cellular localization	Cytoplasm / Nucleus
Properties	High fluorescence yield High photostability Very hydrophilic Excellent solubility in water Very little aggregation New dye with net charge of-1
Preparation and Storage	-20 degree C

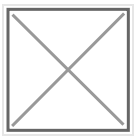
IMAGES

Application Data
Optical properties

WB (Western Blot)
Western blot analysis of Rat Brain cell lysates showing detection of ~22 kDa Alpha B Crystallin protein using Rabbit Anti-Alpha B Crystallin Polyclonal Antibody . Lane 1: Molecular Weight Ladder (MW). Lane 2: Rat Brain cell lysates. Load: 15 ug. Block: 5% Skim Milk in 1X TBST. Primary Antibody: Rabbit Anti-Alpha B Crystallin Polyclonal Antibody at 1:1000 for 60 min at RT. Secondary Antibody: Goat Anti-Rabbit IgG: HRP at 1:1000 for 60 min at RT. Color Development: ECL solution for 6 min in RT. Predicted/Observed Size: ~22 kDa.



ICC (Immunocytochemistry)
Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Alpha B Crystallin Polyclonal Antibody . Tissue: Heat Shocked Cervical cancer cell line (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Alpha B Crystallin Polyclonal Antibody at 1:120 for 12 hours at 4 degree C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Actin filament bundles. Nuclear splicing speckles. Exosomes. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-Alpha B Crystallin Antibody. (C) Composite. Heat Shocked at 42 degree C for 1h.



WB (Western Blot)
Western blot analysis of Human A431, HCT116, HeLa, HepG2, HEK293, HUVEC, Jurkat, MCF7, PC3 and T98G cell lysates showing detection of ~22 kDa Alpha B Crystallin protein using Rabbit Anti-Alpha B Crystallin Polyclonal Antibody . Lane 1: Molecular Weight Ladder (MW). Lane 2: A431 cell lysates. Lane 3: HCT116 cell lysates. Lane 4: HeLa cell lysates. Lane 5: HepG2 cell lysates. Lane 6: HEK293 cell lysates. Lane 7: HUVEC cell lysates. Lane 8: Jurkat cell lysates. Lane 9: MCF7 cell lysates. Lane 10: PC3 cell lysates. Lane 11: T98G cell lysates. Load: 15 ug. Block: 5% Skim Milk in 1X TBST. Primary Antibody: Rabbit Anti-Alpha B Crystallin Polyclonal Antibody at 1:1000 for 60 min at RT. Secondary Antibody: Goat Anti-Rabbit IgG: HRP at 1:1000 for 60 min at RT. Color Development: ECL solution for 6 min in RT. Predicted/Observed Size: ~22 kDa.

ICC (Immunocytochemistry)
Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Alpha B Crystallin Polyclonal Antibody . Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Alpha B Crystallin Polyclonal Antibody at 1:120 for 12 hours at 4 degree C. Secondary Antibody: APC Goat Anti-Rabbit (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Actin filament bundles. Nuclear splicing speckles. Exosomes. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Alpha B Crystallin Antibody. (C) Composite. Heat Shocked at 42 degree C for 1h.

ADDITIONAL INFORMATION

Related Product Information for anti-CRYAB antibody	**Background Info:** Detects ~22kDa. Does not cross-react with alphaA-crystallin. **Scientific Background:** 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 cystallins 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). Specifically, alpha-B cystallin 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 (9).
Product Categories/Family for anti-CRYAB antibody	Chaperones; Heat Shock
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. Yaung J., et al. (2007) Molecular Vision 13: 566-577. 9. Head M.W. et al. (2000) Neuropathol Appl Neurobiol. 26: 304-312.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4503057
NCBI GeneID	1410

NCBI Accession #	NP_001876.1
NCBI GenBank Nucleotide #	NM_001885.2
UniProt Accession #	P02511; O43416; Q9UC37; Q9UC38; Q9UC39; Q9UC40; Q9UC41; B0YIX0
NCBI Official Full Name	alpha-crystallin B chain
NCBI Official Synonym Full Names	crystallin, alpha B
NCBI Official Symbol	CRYAB
NCBI Official Synonym Symbols	MFM2; CRYA2; CTPP2; HSPB5; CMD1II; CTRCT16; HEL-S-101
NCBI Protein Information	alpha-crystallin B chain; heat shock protein beta-5; rosenthal fiber component; heat-shock 20 kD like-protein; renal carcinoma antigen NY-REN-27; epididymis secretory protein Li 101
UniProt Protein Name	Alpha-crystallin B chain
UniProt Gene Name	**CRYAB**
UniProt Synonym Gene Names	CRYA2; HspB5
UniProt Entry Name	CRYAB_HUMAN

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/polyclonal/alpha-b-crystallin-antibody-immunofluorescence-immunocytochemistry-immunohistochemistry-western-blot-elisa/103628