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Datasheet for 100-401-F18

Alpha B Crystallin Antibody

Overview

Description:	Anti-Alpha B Crystallin (RABBIT) Antibody - 100-401-F18
Item No.:	100-401-F18
Size:	200 µL
Applications:	IF, WB
Reactivity:	Human, Mouse, Rat, Bovine, Chicken
Host Species:	Rabbit

Product Details

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. 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. 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. 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 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.
Synonyms:	AACRYA, Alpha crystallin B chain, CRYA2, CRYAB, CTPP2, HspB5, NY REN 27 antigen, Rosenthal fiber component, Renal carcinoma antigen NY-REN-27, Heat shock protein beta-5
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	CRYAB
Reactivity:	Human, Mouse, Rat, Bovine, Chicken
Immunogen Type:	Conjugated Peptide
Immunogen:	Crystallin Alpha B Antibody was produced from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to human alpha B crystallin.
Purity/Specificity:	Anti-Crystallin Alpha B Antibody was prepared from monospecific antiserum by delipidation and defibrination. A BLAST analysis was used to suggest cross-reactivity with Crystallin Alpha B from Human, Mouse, Rat, Cow, and Chicken based on 100% homology with the immunizing sequence. Does not cross-react with α A-crystallin. Cross-reactivity with Crystallin Alpha B from other sources has not been determined. Heat Shock research.
Relevant Links:	• NCBI - NP_001876.1 • GeneID - 1410 • UniProtKB - P02511

Application Details

Tested Applications:	IF, WB
Application Note:	Anti-Crystallin Alpha B Antibody is tested for use in WB and IF microscopy, and suitable for IHC. Expect a band approximately ~22kDa on specific lysates. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	1:120
IHC:	User Optimized
WB:	1:5000-10000

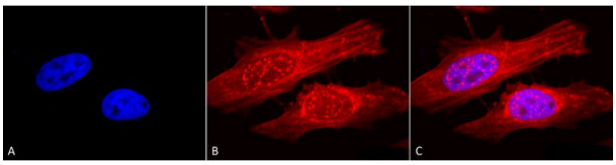
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	1X PBS, pH 7.4
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

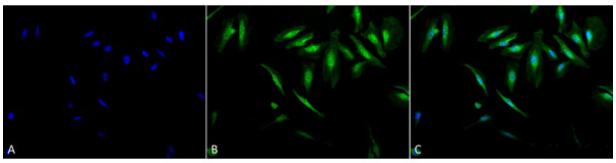
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

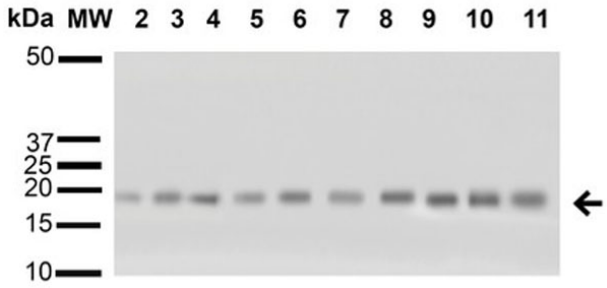
Images



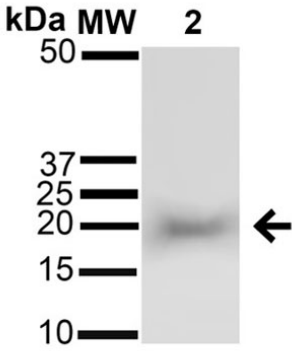
Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Alpha B Crystallin Antibody.
Tissue: Heat Shocked Cervical cancer cell line (HeLa).
Species: Human.
Fixation: 2% Formaldehyde for 20 min at RT.
Antigen Retrieval: Heat Shocked at 42°C for 1h.
Primary Antibody: Rabbit Anti-Alpha B Crystallin Polyclonal Antibody at 1:120 for 12 hours at 4°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.



Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Alpha B Crystallin Antibody.
Tissue: Heat Shocked Cervical cancer cell line (HeLa).
Species: Human.
Fixation: 2% Formaldehyde for 20 min at RT.
Antigen Retrieval: Heat Shocked at 42°C for 1h.
Primary Antibody: Rabbit Anti-Alpha B Crystallin Antibody at 1:120 for 12 hours at 4°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.



Western Blot
Western blot of Alpha B Crystallin.
Load: 15 µg. 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.
Block: 5% Skim Milk in 1X TBST.
Primary Antibody: Rabbit Anti-Alpha B Crystallin 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.



Western Blot
Western blot of Alpha B Crystallin.
Load: 15 µg.
Lane 1: Molecular Weight Ladder (MW). Lane 2: Rat Brain cell lysates.
Block: 5% Skim Milk in 1X TBST.
Primary Antibody: Rabbit Anti-Alpha B Crystallin 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.

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