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Alpha A Crystallin Antibody
Alpha A Crystallin Antibody, Clone 1H3.B8
Catalog # ASM10063

Specification

Alpha A Crystallin Antibody - Product Information

Application	**WB**
Primary Accession	P02489
Other Accession	NP_000385.1
Host	**Mouse**
Isotype	**IgG1**
Reactivity	**Human, Mouse, Rat, Bovine**
Clonality	**Monoclonal**
Format	**Biotin**

Description
Mouse Anti-Human Alpha A Crystallin Monoclonal IgG1

Target/Specificity
Detects ~20kDa. Does not cross-react with αB-crystallin, βL-crystallin, BH- crystallin, γ-crystallin, HSP25, HSP27 or HSP47 proteins.

Other Names
Heat shock protein beta4 Antibody, Acry 1 Antibody, CRYA1 Antibody, CRYAA Antibody, HSPB4 Antibody

Immunogen
Native Alpha Crystallin

Purification
Protein G Purified

Storage	**-20ºC**

Storage Buffer
PBS pH7.2, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
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.

Cellular Localization
Cytoplasm | Nucleus

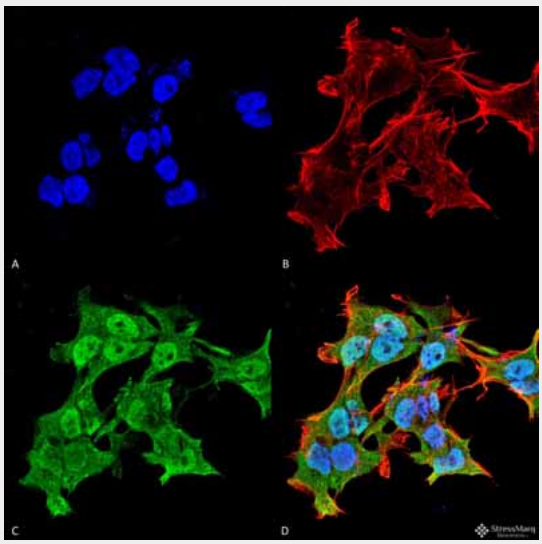
Alpha A Crystallin Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

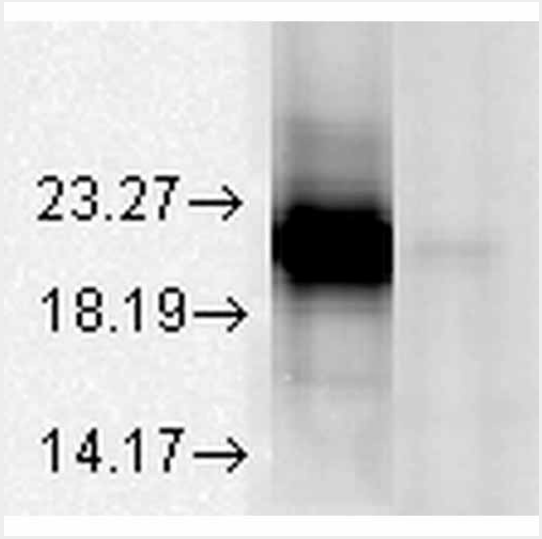
- Western Blot
- Blocking Peptides

- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Alpha A Crystallin Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Alpha A Crystallin Monoclonal Antibody, Clone 1H3.B8 (ASM10063). 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 (ASM10063) 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 (ASM10063). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Alpha A Crystallin Monoclonal

Antibody (ASM10063) 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.

Alpha A Crystallin Antibody - 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).

Alpha A Crystallin Antibody - 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
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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.
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