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Datasheet for ABIN361799

anti-CRYAA antibody

2 Images

Overview

Quantity:	200 µg
Target:	CRYAA
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CRYAA antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	Native Alpha Crystallin
Clone:	1H3-B8
Isotype:	IgG1
Specificity:	Detects ~20 kDa. Does not cross-react with αB-crystallin, βL-crystallin, BH-crystallin, γ-crystallin, HSP25, HSP27 or HSP47 proteins.
Cross-Reactivity:	Cow, Human, Mouse, Rat
Purification:	Protein G Purified

Target Details

Target:	CRYAA
Alternative Name:	Alpha A Crystallin (CRYAA Products)

Target 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 (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).

Gene ID: 1409

NCBI Accession: [NP_000385](#)

UniProt: [P02489](#)

Pathways: [M Phase](#)

Application Details

Application Notes:

- WB (1:2000)
- ICC/IF (1:100)
- optimal dilutions for assays should be determined by the user.

Comment: 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.

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 mg/mL

Buffer: PBS pH 7.2, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated

Preservative: Sodium azide

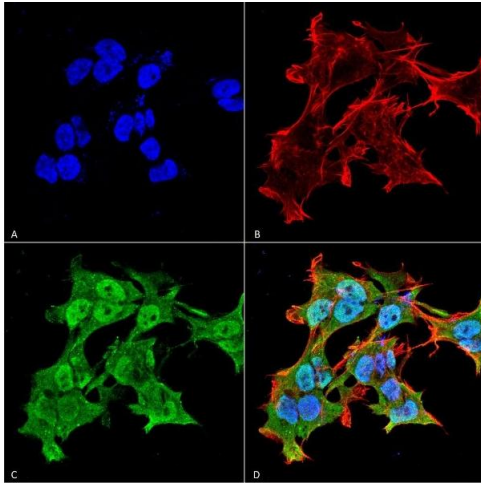
Handling

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C

Storage Comment: -20°C

Images



Immunocytochemistry

Image 1. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Alpha A Crystallin Monoclonal Antibody, Clone 1H3.B8 (ABIN361798 and ABIN361799). 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 (ABIN361798 and ABIN361799) 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 60 min RT, 5 min RT. Localization: Cytoplasm . Magnification: 60X. (A) DAPI (blue) nuclear stain. (B) Phalloidin Texas Red F-Actin stain. (C) Alpha A Crystallin Antibody. (D) Composite.



Image 2. Alpha A Crystallin (1H3 B8), alphaA (L) and AlphaB (R) crystallin.