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Product datasheet for AP22889PU-N

Alpha B Crystallin (CRYAB) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	**Immunohistochemistry on Paraffin Sections:** 10 µg/ml. **Western Blot:** 1/1000.
Reactivity:	Human, Bovine, Mouse, Porcine, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	CRYAB antibody was raised against synthetic peptide derived from sequence near the carboxy-terminus of human alphaB-Crystallin conjugated to KLH
Specificity:	This antibody reacts to Alpha Crystallin B Chain (CRYAB).
Formulation:	PBS containing 0.09% Sodium Azide as preservative and 50% glycerol State: Purified State: Liquid purified Ig fraction
Concentration:	lot specific
Purification:	Protein A Chromatography
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	crystallin alpha B
Database Link:	Entrez Gene 12955 MouseEntrez Gene 25420 RatEntrez Gene 1410 Human P02511

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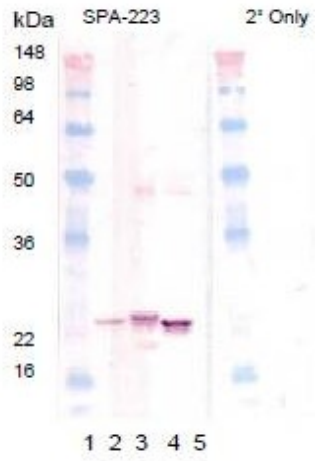
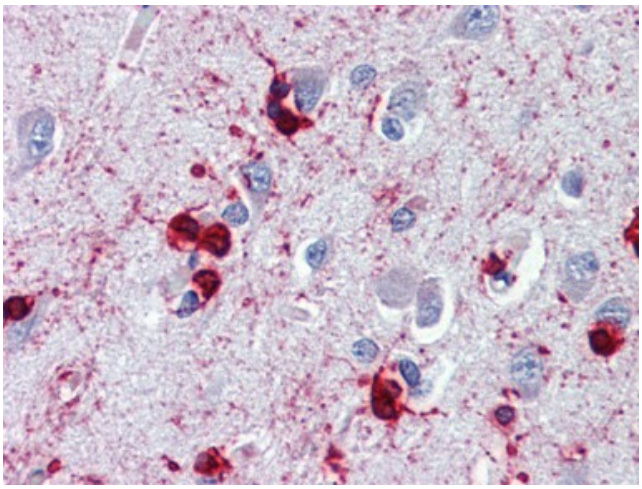
Background: Alpha-crystallins composed of ~20 kDa alphaA and alphaB subunits function as major water-soluble proteins accounting for almost 50% of total protein in the mammalian transparent eye lens, also existing in a variety of other tissues1. Crystallin families beta and gamma share homology with each other but not the alpha-crystallin family or the small heat shock protein (sHsp) family. sHsps including the alpha- crystallin proteins are induced by heat and other stress insults in a variety of organisms. The alpha-crystallins possess structural and functional similarities and share sequence homology with Hsp25/273. Most sHsps exhibit four common structural and functional features: monomeric molecular weight between 12 and 43kDa; the formation of large oligomeric complexes especially for alphaA-crystallin, alphaB-crystallin and Hsp25/27; a moderately conserved alpha-crystallin domain in the central region of the protein; and molecular chaperone activity. The alpha-crystallin domain bounded by variable N-terminal and C-terminal extensions contains approximately 80 residues and participates in oligomer assembly. Oligomers, potentially 800kDa or more, exhibit dynamic subunit exchanges and organizational plasticity, which may promote functional diversity. Phosphorylation of serine residues specifically for Hsp27 occurs in response to stress during development, typically decreasing oligomer size. Chaperone activity requires oligomerization (which, in turn, modulates the chaperone activity) and is confined to binding unfolded intermediates to prevent irreversible aggregation, even though productive release and refolding of denatured proteins requires close cooperation with other chaperones. Other proposed functions include a role in membrane stabilization and modulation of intermediate filament organization during physiological stress and neurodegenerative disease.

Synonyms: Alpha(B)-crystallin, CRYAB, Heat shock protein beta-5, Renal carcinoma antigen NY-REN-27, HspB5

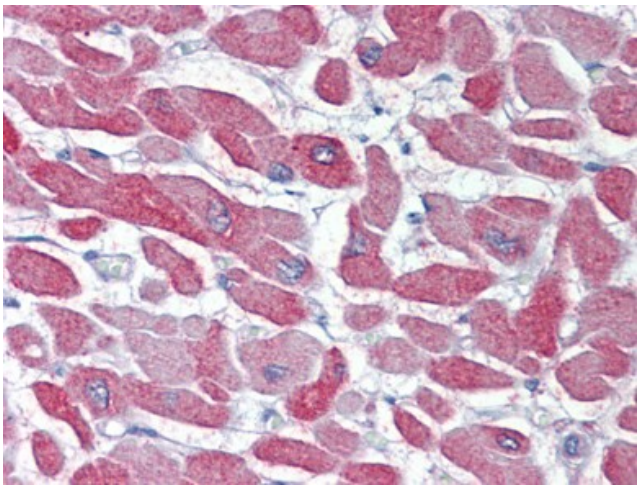
Product images:



Western Blot Analysis of SPA-223: Lane 1: MWM Lane 2: SPP-225 Lane 3: SPP-226 Lane 4: SPP-227 Lane 5: SPP-235



Brain, cortex, Human: Formalin-Fixed, Paraffin-Embedded (FFPE)



Heart, Human: Formalin-Fixed, Paraffin-Embedded (FFPE)