[pSer^{59}]αB-Crystallin polyclonal antibody

α-Crystallins composed of αA (~19 kDa) and αB (~19.2 kDa) subunits, are major water-soluble proteins accounting for almost 50% of total protein in the mammalian transparent eye lens and they are also found in a variety of other tissues. Alpha-crystallins are also referred to as small heat shock proteins, since they are induced by increased temperature in a variety of organisms. The α-crystallins have sequence homology as well as structural and functional similarities with the small Hsp's such as Hsp25/27. Most α-crystallins have four common structural and functional features: (i) molecular weight between 12 and 43kDa; (ii) the formation of large oligomeric complexes composed of αA-crystallin, αB-crystallin and Hsp25/27; (iii) the moderately conserved α-crystallin domain in the central region of the protein; and (iv) molecular chaperone activity. The α-crystallin domain comprises approximately 90 residues, is bounded by variable N-terminal and C-terminal extensions and is involved in oligomer assembly. Oligomers can reach 800 kDa or more and are dynamic, exhibiting subunit exchanges and organizational plasticity, possibly leading to functional diversity. Phosphorylation of serine residues occurs during development and in response to stress, and usually decreases oligomer size. Chaperone activity requires, and is modulated by, oligomerization and is limited to binding unfolded intermediates to prevent irreversible aggregation. Although 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. Alpha B Crystallin is phosphorylated on serine 45 by ERK1/2 and serine 59 by MAPKAPK-2. When mono-phosphoylated αB-crystallin is isolated it contains only αB-crystallin phosphorylated at serine 19.

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Ordering Information

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ADI-SPA-227-D	50µg

ADI-SPA-227-F	200µg

Manuals, SDS & CofA

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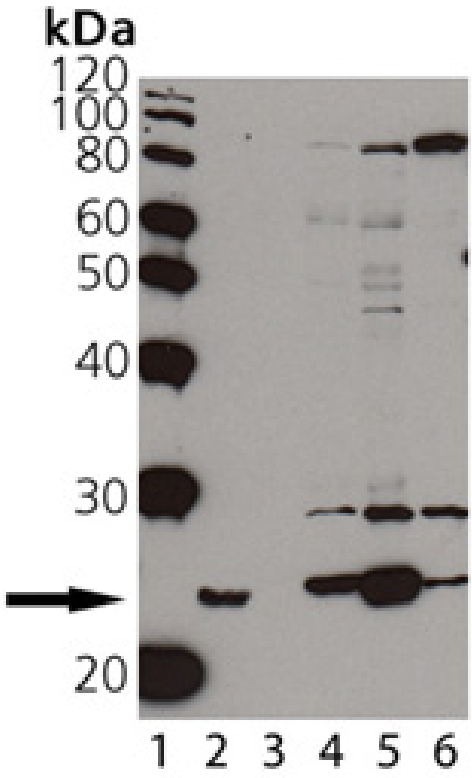

Western blot analysis of [pSer59] αB-Crystallin: Lane 1: MWM, Lane 2: α-Crystallin (bovine), (native) (Prod No. ADI-SPP-225), Lane 3: β-Crystallin (bovine), (native) (Prod No. ADI-SPP-235), Lane 4: Mouse Heart Tissue Lysate, Lane 5: Rat Heart TIssue Lysate, Lane 6: ESK-4 Cell Lysate

Handling & Storage

Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	CRYAB, HSPB5
Application	IP, WB
Formulation	Liquid. In sodium phosphate buffer, pH 7.0, containing 0.1% sodium azide, 3% BSA, and 50% glycerol.
Host	Rabbit
Immunogen	Synthetic peptide corresponding to to aa 54-64 of of human αB-crystallin phosphorylated at Ser59.
Recommendation Dilutions/Conditions	Western Blot (ECL, 1:1,000)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from rabbit serum.
Species Reactivity	Bovine, Mouse, Porcine, Rat, Sheep
UniProt ID	P02511
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee.**

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