

Product name:	Crystallin- α B (phospho Ser45) Rabbit Polyclonal Antibody
Cat number:	ABN04506
Conjugate:	Unconjugated
Size:	100 μ L
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human CRYAB around the phosphorylation site of Ser45. AA range:21-70
Reactivity:	Human,Mouse,Rat,Monkey
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight:	24kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

Mammalian lens crystallins are divided into alpha, beta, and gamma families. Alpha crystallins are composed of two gene products: alpha-A and alpha-B, for acidic and basic, respectively. Alpha crystallins can be induced by heat shock and are members of the small heat shock protein (HSP20) family. They act as molecular chaperones although they do not renature proteins and release them in the fashion of a true chaperone; instead they hold them in large soluble aggregates. Post-translational modifications decrease the ability to chaperone. These heterogeneous aggregates consist of 30-40 subunits; the alpha-A and alpha-B subunits have a 3:1 ratio, respectively. Two additional functions of alpha crystallins are an autokinase activity and participation in the intracellular architecture. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Crystallins do not turn over as the lens ages, providing ample opportunity for post-translational modifications or oxidations. These modifications may change crystallin solubility properties and favor senile cataract. Defects in CRYAB are the cause of alpha-B crystallinopathy [MIM:608810]. Alpha-B crystallinopathy is an autosomal dominant form of desmin-related myopathy (DRM) that results in weakness of the proximal and distal limb muscle (including neck, velopharynx, and trunk muscles), signs of cardiomyopathy and cataract. Patients with progressive myopathy characterized by myofibrillar degeneration that commences at the Z-disk, have been described. Mutations truncate the essential C-terminal domain of the protein required for the chaperone function. Seen as Rosenthal fiber protein in the brain tissue of patients with Alexander disease. May contribute to the transparency and refractive index of the lens. mass spectrometry: PubMed:10930324, mass spectrometry: PubMed:8175657, mass spectrometry: With 1 phosphate group PubMed:10930324, mass spectrometry: With 1 phosphate group PubMed:8175657, mass spectrometry: With 2 phosphate groups PubMed:8175657, similarity: Belongs to the small heat shock protein (HSP20) family. subunit: Aggregates with homologous proteins, including CRYAA and the small heat shock protein HSPB1, to form large heteromeric complexes. Interacts with HSPBAP1 and TTN/titin. tissue specificity: Lens as well as other tissues.