

**Product Name: Crystallin- $\alpha$ B (phospho Ser45) Rabbit Polyclonal Antibody**  
**Catalog #: APRab04506**

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## Summary

<b>Production Name</b>	Crystallin- $\alpha$ B (phospho Ser45) Rabbit Polyclonal Antibody
<b>Description</b>	Rabbit Polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC-P,IF-P,IF-F,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat,Monkey

## Performance

<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Phospho Antibody
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

## Immunogen

<b>Gene Name</b>	CRYAB
<b>Alternative Names</b>	CRYAB; CRYA2; Alpha-crystallin B chain; Alpha(B)-crystallin; Heat shock protein beta-5; HspB5; Renal carcinoma antigen NY-REN-27; Rosenthal fiber component
<b>Gene ID</b>	1410.0
<b>SwissProt ID</b>	P02511.The antiserum was produced against synthesized peptide derived from human CRYAB around the phosphorylation site of Ser45. AA range:21-70

## Application

<b>Dilution Ratio</b>	WB 1:500-1:2000, IHC-P 1:100-1:300, ELISA 1:10000, IF-P/IF-F/ICC/IF 1:50-200
<b>Molecular Weight</b>	24kDa

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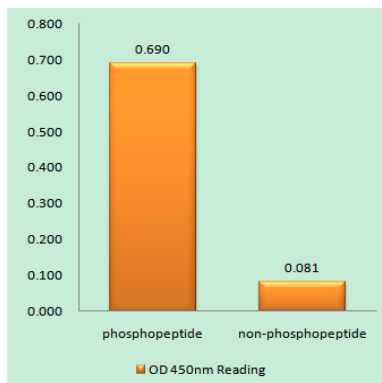
## Background

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.

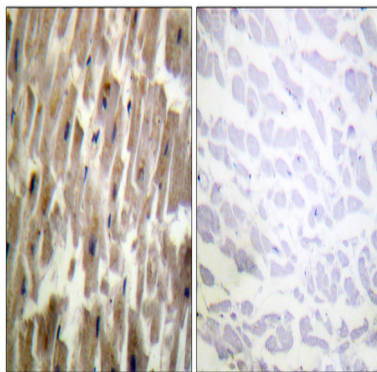
## Research Area

## Image Data

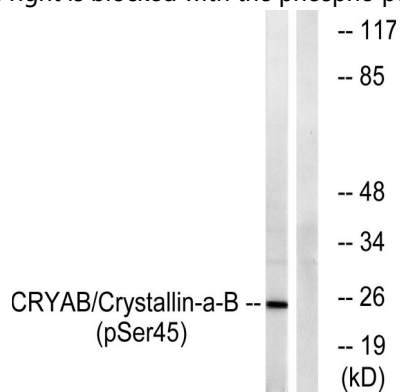
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Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using CRYAB (Phospho-Ser45) Antibody



Immunohistochemistry analysis of paraffin-embedded human heart, using CRYAB (Phospho-Ser45) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from COS7 cells treated with anisomycin 25ug/ml 30', using CRYAB (Phospho-Ser45) Antibody. The lane on the right is blocked with the phospho peptide.

**Note**

For research use only.