Best Tools for immunology Research

Crystallin-αB (phospho Ser45) Polyclonal Antibody

Catalog No :	YP0736
Reactivity :	Human;Mouse;Rat;Monkey
Applications :	WB;IHC;IF;ELISA
Target :	Crystallin-αB
Fields :	>>Protein processing in endoplasmic reticulum;>>Longevity regulating pathway - multiple species
Gene Name :	CRYAB
Protein Name :	Alpha-crystallin B chain
Human Gene Id :	1410
Human Swiss Prot No :	P02511
Mouse Gene Id :	12955
Mouse Swiss Prot No :	P23927
Rat Gene Id :	25420
Rat Swiss Prot No :	P23928
Immunogen :	The antiserum was produced against synthesized peptide derived from human CRYAB around the phosphorylation site of Ser45. AA range:21-70
Specificity :	Phospho-Crystallin-αB (S45) Polyclonal Antibody detects endogenous levels of Crystallin-αB protein only when phosphorylated at S45.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:10000.. IF 1:50-200

Purification : The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Concentration : 1 mg/ml

Storage Stability : -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band : 24kD

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 distin

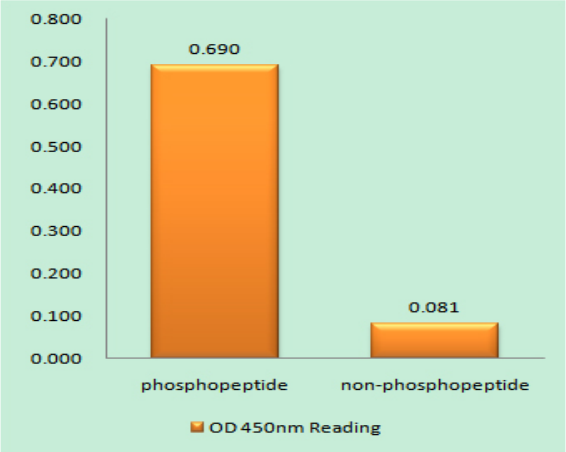
Function : disease:Crystallins do not turn over as the lens ages, providing ample opportunity for post-translational modifications or oxidations. These modifications may change crystallin solubility properties and favor senile cataract.,disease:Defects in CRYAB are the cause of alpha-B crystallinopathy [MIM:608810]. Alpha-B crystallinopathy is a 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.,disease:Seen as Rosenthal fiber protein in the brain tissue of patients with Alexander disease.,function:May contribute

Subcellular Location : Cytoplasm . Nucleus . Secreted . Lysosome . Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles (PubMed:19464326). Localizes at the Z-bands and the intercalated disk in cardiomyocytes (PubMed:28493373). Can be secreted; the secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10; it results in protein translocation from the cytoplasm into the ERGIC (endoplasmic reticulum-Golgi intermediate compartment) followed by vesicle entry and secretion (PubMed:32272059). .

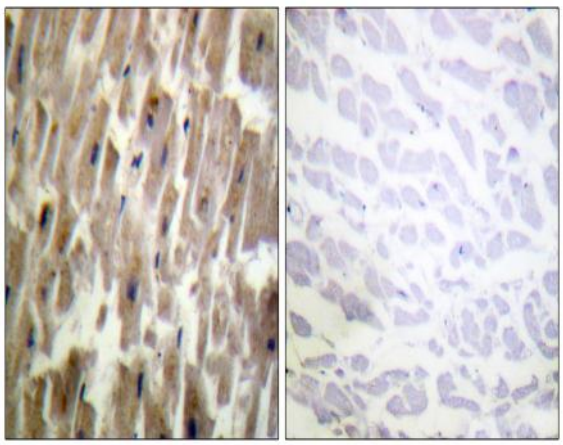
Expression : Lens as well as other tissues (PubMed:838078, PubMed:2387586). Expressed in myocardial tissue (PubMed:28493373).

Tag :	orthogonal
Sort :	4600
No4 :	1
Host :	Rabbit
Modifications :	Phospho

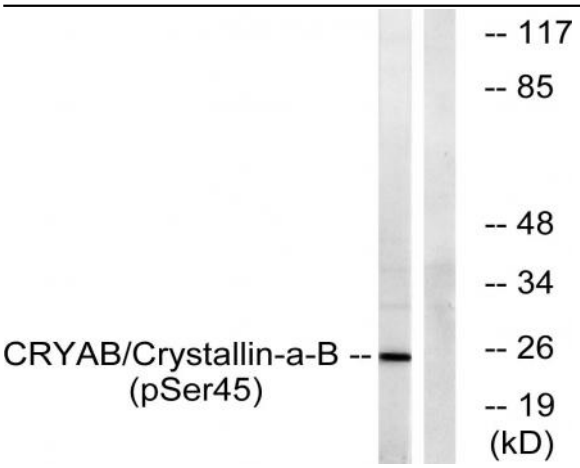
Products Images



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.