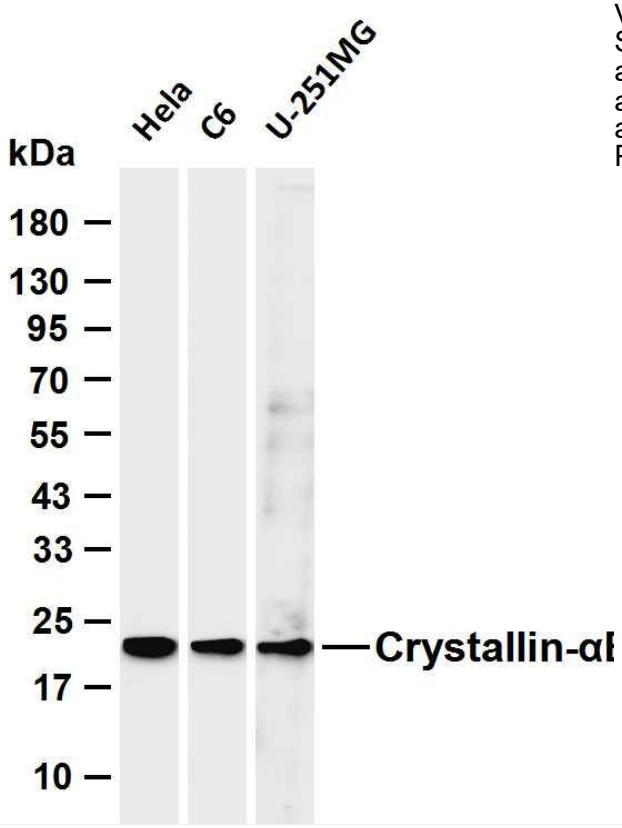
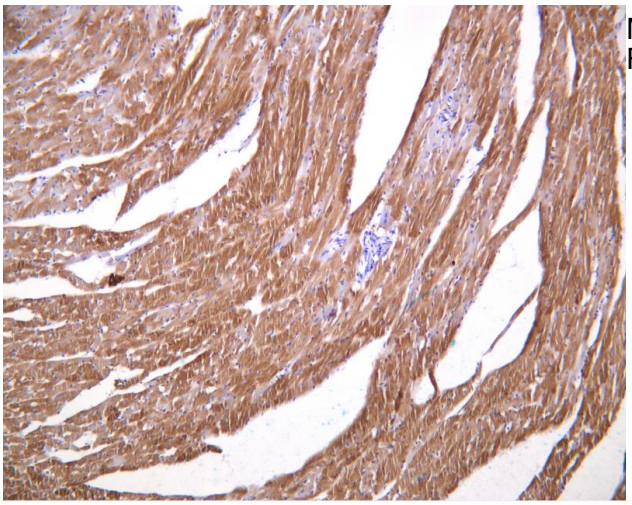
Crystallin-α B Rabbit mAb

Catalog No	YP-rAb-18429
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	CRYAB
Protein Name	Alpha-crystallin B chain
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	CRYAB ; CRYA2 ; Alpha-crystallin B chain ; Alpha ; B ; -crystallin ; Heat shock protein beta-5 ; HspB5 ; Renal carcinoma antigen NY-REN-27 ; Rosenthal fiber component
Observed Band	22kD
Calculated Molecular Weight	20kD
Cell Pathway	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). .
Tissue Specificity	Lens as well as other tissues (PubMed:838078, PubMed:2387586). Expressed in myocardial tissue (PubMed:28493373).
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

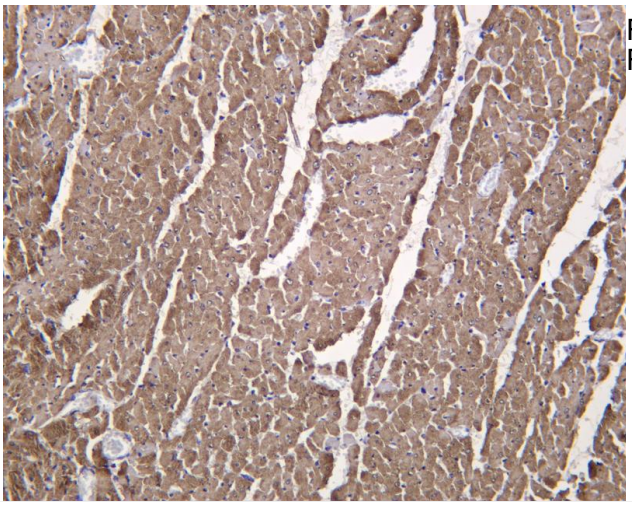
	crystallinopathy is a an autosomal dominant form of desmin-related myopathy (DRM) that results in weakness of the proximal and distal limb muscle (including neck, velopharynx, and trunk muscles), signs of cardiomyopathy and cataract. Patients with progressive myopathy characterized by myofibrillar degeneration 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 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.,
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
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



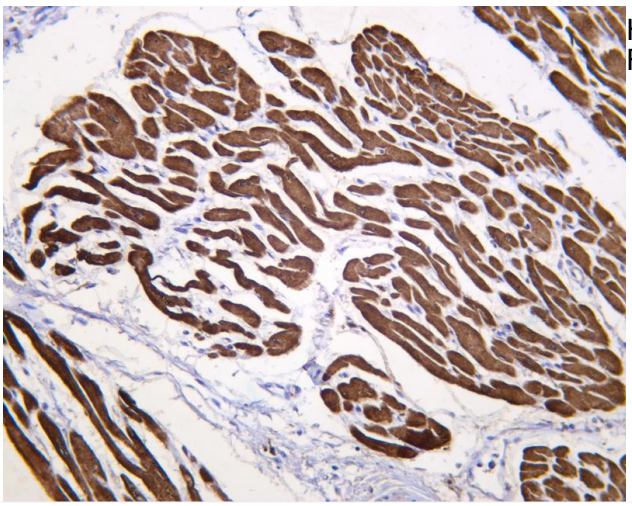
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Crystallin- α B antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: C6 Lane 3: U-251MG Predicted band size: 20kDa Observed band size: 22kDa



Mouse heart muscle was stained with anti-Crystallin- α B Rabbit antibody



Rat heart muscle was stained with anti-Crystallin- α B Rabbit antibody



Human heart muscle was stained with anti-Crystallin- α B Rabbit antibody