Alpha-Crystallin B (CRYAB) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Alpha-crystallin B (CRYAB), Polyclonal Antibody
Full Product Name	Alpha-crystallin B (pS59) Antibody
Product Gene Name	anti-CRYAB antibody
Product Synonym Names	CRYA2; Alpha-crystallin B chain; Alpha(B)-crystallin; Heat shock protein beta-5; HspB5; Renal carcinoma antigen NY-REN-27; Rosenthal fiber component
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Rat, Monkey
Form/Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH7.3, 30% glycerol, and 0.01% sodium azide.
Purity/Purification	The antibody was purified by immunogen affinity chromatography.
Specificity	Recognizes endogenous levels of Alpha-crystallin B (pS59) protein.
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C for one year. Avoid freeze/thaw cycles.
Molecular Weight	20,159 Da
Chromosome Location	Chromosome: 11; NC_000011.9 (111779350..111782473, complement). Location: 11q22.3-q23.1
OMIM	123590
3D Structure	ModBase 3D Structure for P02511
Immunogen	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Alpha-crystallin B (pS59). The exact sequence is proprietary.
Product Categories/Family for anti-CRYAB antibody	Primary Antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-CRYAB antibody	Western Blot (WB), Immunohistochemistry (IHC)
Application Notes for anti-CRYAB antibody	WB: 1:500-1:1000 IHC: 1:50-1:200
Related Product Information for anti-CRYAB antibody	MBS8583565 is an antibody targeting CRYAB. Also known as Alpha-crystallin B (pS59) Antibody. Reactive in Human, Rat, Monkey. Host: Rabbit. Rabbit polyclonal antibody to Alpha-crystallin B (pS59)
Other Notes	Small volumes of anti-CRYAB antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CRYAB. It may not necessarily be applicable to this product.

NCBI GI #	4503057

NCBI GeneID	1410
NCBI Accession #	NP_001876.1
UniProt Primary Accession #	P02511
UniProt Secondary Accession #	O43416; Q9UC37; Q9UC38; Q9UC39; Q9UC40; Q9UC41; B0YIX0
UniProt Related Accession #	P02511
GenBank Nucleotide #	NM_001885.1
NCBI Official Full Name	alpha-crystallin B chain
NCBI Official Synonym Full Names	crystallin, alpha B
NCBI Official Symbol	CRYAB
NCBI Official Synonym Symbols	CRYA2; CTPP2; HSPB5; CMD1II
UniProt Protein Name	Alpha-crystallin B chain
UniProt Synonym Protein Names	Alpha(B)-crystallin; Heat shock protein beta-5; HspB5; Renal carcinoma antigen NY-REN-27; Rosenthal fiber component
Protein Family	Alpha-crystallin
UniProt Gene Name	CRYAB
UniProt Synonym Gene Names	CRYA2; HspB5
UniProt Entry Name	CRYAB_HUMAN
NCBI Protein Information	alpha-crystallin B chain; heat shock protein beta-5; rosenthal fiber component; heat-shock 20 kD like-protein; renal carcinoma antigen NY-REN-27
NCBI Summary for CRYAB	Crystallins are separated into two classes: taxon-specific, or enzyme, and ubiquitous. The latter class constitutes the major proteins of vertebrate eye lens and maintains the transparency and refractive index of the lens. Since lens central fiber cells lose their nuclei during development, these crystallins are made and then retained throughout life, making them extremely stable proteins. Mammalian lens crystallins are divided into alpha, beta, and gamma families; beta and gamma crystallins are also considered as a superfamily. Alpha and beta families are further divided into acidic and basic groups. Seven protein regions exist in crystallins: four homologous motifs, a connecting peptide, and N- and C-terminal extensions. 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 (sHSP also known as the 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. Alpha-A and alpha-B gene products are differentially expressed; alpha-A is preferentially restricted to the lens and alpha-B is expressed widely in many tissues and organs. Elevated expression of alpha-B crystallin occurs in many neurological diseases; a missense mutation cosegregated in a family with a desmin-related myopathy. [provided by RefSeq, Jul 2008]

UniProt Comments for CRYAB	CRYAB: a major structural protein of the eye lens. A member of the small heat shock protein (sHSP also known as the HSP20) family. Alpha-B is expressed in the lens as well as other tissues. Elevated expression of alpha-B crystallin occurs in many neurological diseases; a missense mutation cosegregated in a family with a desmin-related myopathy. Protein type: Heat shock protein; Chaperone Chromosomal Location of Human Ortholog: 11q22.3-q23.1 Cellular Component: microtubule cytoskeleton; Golgi apparatus; cell surface; mitochondrion; cytoplasm; plasma membrane; actin filament bundle; nucleus; cytosol; Z disc Molecular Function: identical protein binding; protein binding; protein homodimerization activity; microtubule binding; metal ion binding; unfolded protein binding; structural constituent of eye lens Biological Process: lens development in camera-type eye; muscle development; protein folding; stress-activated MAPK cascade; microtubule polymerization or depolymerization; negative regulation of caspase activity; response to estradiol stimulus; tubulin folding; negative regulation of intracellular transport; response to hydrogen peroxide; muscle contraction; response to hypoxia; negative regulation of cell growth; protein homooligomerization; aging; negative regulation of apoptosis Disease: Cataract 16, Multiple Types; Myopathy, Myofibrillar, Fatal Infantile Hypertonic, Alpha-b Crystallin-related; Myopathy, Myofibrillar, 2; Cardiomyopathy, Dilated, 1ii
Research Articles on CRYAB	**1.** Studies indicate that alphaB crystallin is a paradigm example of Small Heat Shock Proteins (sHSPs) oligomeric properties.
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