

CRYAB Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP13697c

Specification

CRYAB Antibody (Center) Blocking peptide - Product Information

Primary Accession [P02511](#)

CRYAB Antibody (Center) Blocking peptide - Additional Information

Gene ID 1410

Other Names

Alpha-crystallin B chain, Alpha(B)-crystallin, Heat shock protein beta-5, HspB5, Renal carcinoma antigen NY-REN-27, Rosenthal fiber component, CRYAB, CRYA2

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP13697c was selected from the Center region of CRYAB. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CRYAB Antibody (Center) Blocking peptide - Protein Information

Name CRYAB ([HGNC:2389](#))

Synonyms CRYA2, HSPB5

Function

May contribute to the transparency and refractive index of the lens. Has chaperone-like activity, preventing aggregation of various proteins under a wide range of stress conditions. In lens epithelial cells, stabilizes the ATP6V1A protein, preventing its degradation by the proteasome (By similarity).

Cellular Location

Cytoplasm. Nucleus Secreted. Lysosome {ECO:0000250|UniProtKB:P23927}. Note=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 Location

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

CRYAB Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

CRYAB Antibody (Center) Blocking peptide - Images

CRYAB Antibody (Center) Blocking peptide - Background

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.

CRYAB Antibody (Center) Blocking peptide - References

Martins-de-Souza, D., et al. J Psychiatr Res 44(14):989-991(2010) Jehle, S., et al. Nat. Struct. Mol. Biol. 17(9):1037-1042(2010) Kida, E., et al. J. Neuropathol. Exp. Neurol. 69(7):745-759(2010) Deng, Y., et al. BMB Rep 43(6):432-437(2010) Houck, S.A., et al. PLoS ONE 5 (7), E11795 (2010) :