10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

CRYAB Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP13697c

Specification

CRYAB Antibody (Center) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P02511
Other Accession	P23928, P41316, Q7M2W6, P23927, Q60HG8, P02510, NP_001876.1, Q5ENY9
Reactivity	**Human, Mouse**
Predicted	**Bovine, Monkey, Pig, Rabbit, Rat, Sheep**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Calculated MW	**20159**
Antigen Region	**84-112**

CRYAB Antibody (Center) - Additional Information

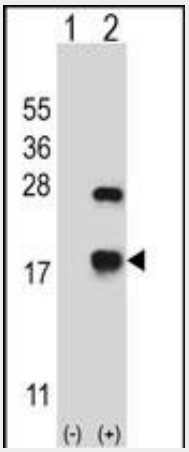
Gene ID 1410

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

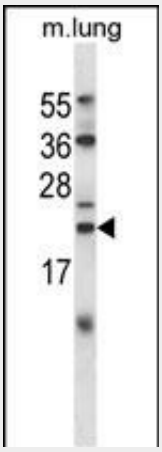
Target/Specificity
This CRYAB antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 84-112 amino acids from the Central region of human CRYAB.

Dilution
WB~~1:1000
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.



Western blot analysis of CRYAB (arrow) using rabbit polyclonal CRYAB Antibody (Center) (Cat. #AP13697c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CRYAB gene.



CRYAB Antibody (Center) (Cat. #AP13697c) western blot analysis in mouse lung tissue lysates (35ug/lane).This demonstrates the CRYAB antibody detected the CRYAB protein (arrow).

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
CRYAB Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

CRYAB Antibody (Center) - 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.

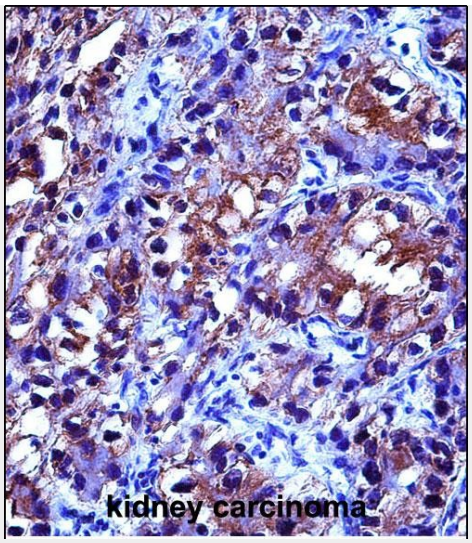
Cellular Location
Cytoplasm. Nucleus Secreted. Note=Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles (PubMed:19464326) Localizes at the Z-bands and the intercalated disk in cardiomyocytes (PubMed:28493373). Can be 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) - Protocols

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

- Western Blot



CRYA Antibody (Center) (Cat. #AP13697c)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of CRYA Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

CRYAB Antibody (Center) - 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,

- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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) - 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) :