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CRYAB Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a full length recombinant CRYAB.
Catalog # AT1641a

Specification

CRYAB Antibody (monoclonal) (M01) - Product Information

Application	**WB, E**
Primary Accession	P02511
Other Accession	BC007008
Reactivity	**Human**
Host	**mouse**
Clonality	**Monoclonal**
Isotype	**IgG1 kappa**
Calculated MW	**20159**

CRYAB Antibody (monoclonal) (M01) - 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
CRYAB (AAH07008, 1 a.a. ~ 175 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

Dilution
WB~~1:500~1000

Format
Clear, colorless solution in phosphate buffered saline, pH 7.2 .

Storage
Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Precautions
CRYAB Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

CRYAB Antibody (monoclonal) (M01) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot

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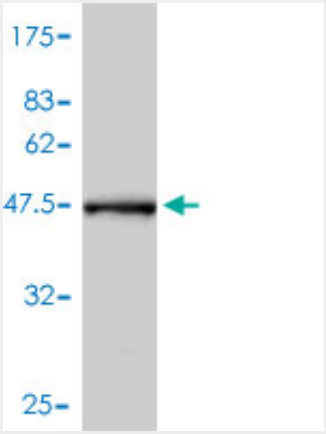
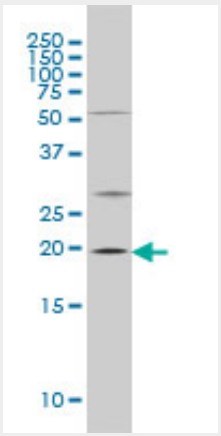
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

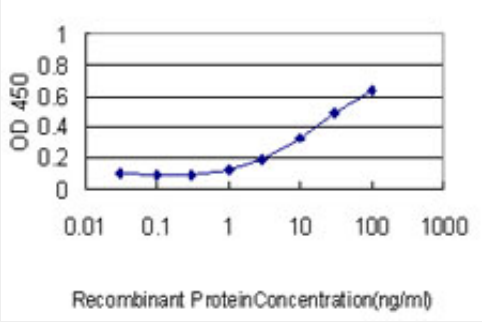
CRYAB Antibody (monoclonal) (M01) - Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (44.99 KDa) .



CRYAB monoclonal antibody (M01), clone 1A10-1A4 Western Blot analysis of CRYAB expression in C32 ((Cat # AT1641a)



Detection limit for recombinant GST tagged CRYAB is approximately 1ng/ml as a capture antibody.

CRYAB Antibody (monoclonal) (M01) - 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 (monoclonal) (M01) - References

Molecular chaperone alphaB-crystallin is expressed in the human fetal telencephalon at midgestation by a subset of progenitor cells. Kida E, et al. J Neuropathol Exp Neurol, 2010 Jul. PMID 20535031.Sex-specific proteome differences in the anterior cingulate cortex of schizophrenia. Martins-de-Souza D, et al. J Psychiatr Res, 2010 Apr 8. PMID 20381070.Analysis of multiple candidate genes in association with phenotypes of multiple sclerosis. Sombekke MH, et al. Mult Scler, 2010 Jun. PMID 20378664.Later retinal degeneration following childhood surgical aphakia in a family with recessive CRYAB mutation (p.R56W). Khan AO, et al. Ophthalmic Genet, 2010 Mar. PMID 20141356.Down regulation of the PEDF gene in human lens epithelium cells changed the expression of proteins vimentin and alphaB-crystallin. Yang J, et al. Mol Vis, 2010 Jan 26. PMID 20104255.