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CRYAB Antibody (monoclonal) (M01)

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

Product Information

Application	WB, E
Primary Accession	P02511
Other Accession	BC007008
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG1 kappa
Clone Names	1A10-1A4
Calculated MW	20159

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 E~~N/A
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.

Background

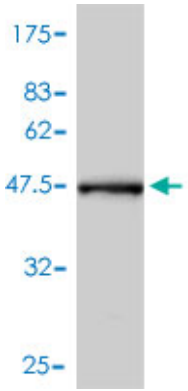
Crystallins are separated into two classes: taxon-specific, or enzyme, and ubiquitous. The latter class constitutes the major proteins of vertebrate eye lens and maintains the transparency and refractive index of the lens. Since lens central fiber cells lose their nuclei during development, these crystallins 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.

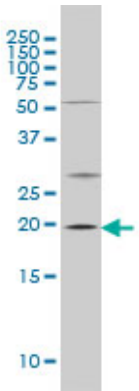
References

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.

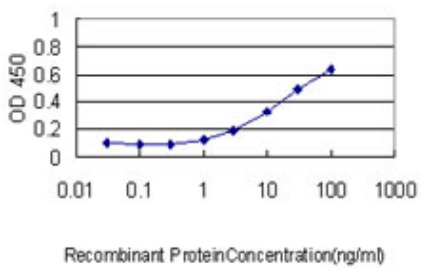
Images



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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.