



Rabbit (polyclonal) Anti- α B-Crystallin

PRODUCT ANALYSIS SHEET

Catalog Number:	AHB0421
Lot Number:	See product label
Quantity:	0.1 mL
Form of Antibody:	Purified immunoglobulin in phosphate buffered saline.
Preservation:	10 mM sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
Purification:	Purified by caprylic acid and ammonium sulfate precipitation.
Immunogen:	A synthetic peptide, corresponding to amino acid residues 1-10 (MDIAIHPWI) of human α B-crystallin, conjugated to keyhole limpet hemocyanin via an N-terminal cysteine residue.
Specificity:	<p>αB-crystallin (GenBank accession number: P02511) is a protein of 20 kDa that bears homology with the small heat shock protein HSP27. As with other small heat shock proteins, αB-crystallin possesses chaperone-like activity, suppressing protein aggregation. Human αB crystallin is encoded by a single gene located on chromosome 11 (cytogenetic band 11q22.3-q23.1). αB-crystallin, along with αA-crystallin, is a major component of the lens, but is also expressed by skeletal, smooth, and cardiac muscle, brain, skin, and kidney.</p> <p>αB-crystallin is phosphorylated at serine 59 in response to stress, and at serines 19 and 45 during mitosis. αB-crystallin phosphorylated at serines 19 and 45 interacts with FBX4, a component of the ubiquitin-protein isopeptide ligase, suggesting a role for this protein in the ubiquitin-proteasome pathway.</p> <p>αB-crystallin is implicated in the progression of several neurodegenerative diseases, including Dementia with Lewy Bodies, Pick's disease, Creutzfeld-Jacob disease, and Alexander's disease. Its role in neuronal remodeling is currently under investigation.</p>
Species Reactivity:	Human. Other species have not been tested.
Applications:	This antibody is suitable for use in Western blotting and immunohistochemistry with formalin-fixed, paraffin-embedded tissue sections.
Suggested Working Dilutions:	In Western blotting, a 1:500 dilution is recommended. The optimal concentration should be determined for each specific application.
Recommended Positive Control:	Ballooned neurons from brain tissue exhibiting Dementia with Lewy Bodies pathology.
Storage:	Store at -20°C . Upon initial thawing, apportion into working aliquots and store at -20°C . Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.
Expiration Date:	Expires one year from date of receipt when stored as instructed.

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

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI AHB0421

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

References:

- Lowe, J., et al. (1992) Ballooned neurons in several neurodegenerative diseases and stroke contain alpha B crystallin. *Neuropathol. Appl. Neurobiol.* 18:341-450.
- Lowe, J. and R.J. Mayer (1993) Ubiquitin in neurodegenerative diseases. *Brain. Pathol.* 3:55-65.
- Kato, S., et al. (1992) Comparative immunohistochemical study on the expression of alpha B crystallin, ubiquitin, and stress-response protein 27 in ballooned neurons in various disorders. *Neuropathol. Appl. Neurobiol.* 18:335-340.
- Den Engelsman, J., et al. (2003) The small heat-shock protein alpha B-crystallin promotes FBX4-dependent ubiquitination. *J. Biol. Chem.* 278:4699-4704.
- Bhat, S.P., et al. (1991) Alpha B Crystallin exists as an independent protein in the heart and in the lens. *Euro. J. Biochem.* 102:775-781.
- Dasgupta, S., et al. (1992) Hypertonic stress induces Alpha B crystallin expression. *Exp. Eye Res.* 54:461-470.
- Thoua, N.M., et al. (2000) Encephalitogenic and immunogenic potential of the stress protein alphaB-crystallin in Biozzi ABH (H-2A(g7)) mice. *J. Neuroimmunol.* 104(1):47-57.
- Ito, H., et al. (1997) Phosphorylation of alphaB-crystallin in response to various types of stress. *J. Biol. Chem.* 272: 29934-29941.
- Kato, K., et al. (1998) Phosphorylation of alphaB-crystallin in mitotic cells and identification of enzymatic activities responsible for phosphorylation. *J. Biol. Chem.* 273:28346-28354.

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

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI AHB0421

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.