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## Lieferung & Zahlungsart

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- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

# αB-crystallin (m): 293T Lysate: sc-118149

## BACKGROUND

Crystallins are the major proteins of the vertebrate eye lens, where they maintain the transparency and refractive index of the lens. Crystallins are divided into α, β and γ families, and the β- and γ-crystallins also compose a superfamily. Crystallins usually contain seven distinctive protein regions, including four homologous motifs, a connecting peptide and N- and C-terminal extensions. α-crystallins consist of three gene products, αA-, αB- and αC-crystallin, which are members of the small heat shock protein family (HSP 20). They are induced by heat shock and act as molecular chaperones by holding denatured proteins in large soluble aggregates. However, unlike other molecular chaperones, α-crystallins do not renature these proteins. The gene encoding human αA-crystallin maps to chromosome 21q22. It is expressed as a protein that is preferentially restricted to the lens. Defects in this gene cause autosomal dominant congenital cataract (ADCC). The human αB-crystallin gene maps to chromosome 11q22 and encodes a protein that is present in many tissues, including lens, heart and skeletal muscle. Elevated expression of αB-crystallin is associated with many neurological diseases, and a missense mutation in this gene has co-segregated in a family with a Desmin-related myopathy.

## REFERENCES


1. Neufer, P.D., et al. 1996. Differential expression of B-crystallin and HSP 27 in skeletal muscle during continuous contractile activity. Relationship to myogenic regulatory factors. J. Biol. Chem. 271: 24089-24095.
2. Litt, M., et al. 1998. Autosomal dominant congenital cataract associated with a missense mutation in the human α-crystallin gene CRYAA. Hum. Mol. Genet. 7: 471-474.
3. Haley, D.A., et al. 1998. The small heat shock protein, αB-crystallin, has a variable quaternary structure. J. Mol. Biol. 277: 27-35.
4. Bova, M.P., et al. 1999. Mutation R120G in αB-crystallin, which is linked to a Desmin-related myopathy, results in an irregular structure and defective chaperone-like function. Proc. Natl. Acad. Sci. USA 96: 6137-6142.
5. Wang, K., et al. 2000. α-crystallin prevents irreversible protein denaturation and acts cooperatively with other heat shock proteins to renature the stabilized partially denatured protein in an ATP-dependent manner. Eur. J. Biochem. 267: 4705-4712.
6. Jaenicke, R., et al. 2001. Lens crystallins and their microbial homologs: structure, stability and function. Crit. Rev. Biochem. Mol. Biol. 36: 435-499.
7. Narberhaus, F. 2002. α-crystallin-type heat shock proteins: socializing minichaperones in the context of a multichaperone network. Microbiol. Mol. Biol. Rev. 66: 64-93.
8. LocusLink Report (LocusID: 1409). http://www.ncbi.nlm.nih.gov/LocusLink/


## CHROMOSOMAL LOCATION

Genetic locus: Cryab (mouse) mapping to 9 A5.3.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PRODUCT

αB-crystallin (m): 293T Lysate represents a lysate of mouse αB-crystallin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

αB-crystallin (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive αB-crystallin antibodies. Recommended use: 10-20 µl per lane.

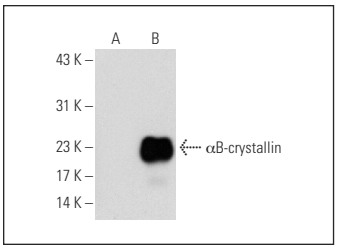
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

αB-crystallin (C-8): sc-137144 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse αB-crystallin expression in αB-crystallin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

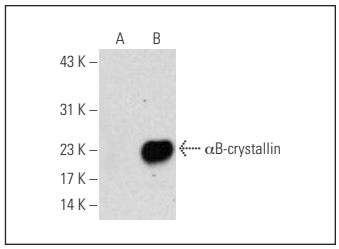
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA




αB-crystallin (C-8): sc-137144. Western blot analysis of αB-crystallin expression in non-transfected: sc-117752 (**A**) and mouse αB-crystallin transfected: sc-118149 (**B**) 293T whole cell lysates.




αB-crystallin (A-7): sc-137143. Western blot analysis of αB-crystallin expression in non-transfected: sc-117752 (**A**) and mouse αB-crystallin transfected: sc-118149 (**B**) 293T whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.