



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



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- Gefahrgutzuschlag
- Expressversand

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# $\alpha$ C-crystallin (m): 293T Lysate: sc-118175

## BACKGROUND

Crystallins are the major proteins expressed in the vertebrate eye lens, where they maintain the transparency and refractive index of the lens. Crystallins are divided into  $\alpha$ ,  $\beta$ , and  $\gamma$  families;  $\beta$  and  $\gamma$ -crystallins compose a superfamily. Crystallins usually contain seven distinctive protein regions, including four homologous motifs, a connecting peptide, and N- and C-terminal extensions.  $\alpha$ -crystallins consist of three gene products,  $\alpha$ A,  $\alpha$ B, and  $\alpha$ C-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,  $\alpha$ -crystallins do not renature these proteins. Research indicates that binding occurs between membranes and  $\alpha$ C-crystallin. The binding site appears to be at the polar-apolar interface in membrane protein (MIP26) and  $\alpha$ C-crystallin; the lipid bilayer becomes less mobile with  $\alpha$ C-crystallin binding.

## REFERENCES

1. Neuffer, P.D., et al. 1996. Differential expression of  $\beta$ -crystallin and Hsp27 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  $\alpha$  crystallin gene CRYAA. *Hum. Mol. Genet.* 7: 471-474.
3. Haley, D.A., et al. 1998. The small heat-shock protein,  $\alpha$ B-crystallin, has a variable quaternary structure. *J. Mol. Biol.* 277: 27-35.
4. Bova, M.P., et al. 1999. Mutation R120G in  $\alpha$ B-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.
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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.  $\alpha$ -crystallin-type heat shock proteins: socializing minichaperones in the context of a multichaperone network. *Microbiol. Mol. Biol. Rev.* 66: 64-93.

## CHROMOSOMAL LOCATION

Genetic locus: Hspb8 (mouse) mapping to 5 F.

## PRODUCT

$\alpha$ C-crystallin (m): 293T Lysate represents a lysate of mouse  $\alpha$ C-crystallin transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## 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.

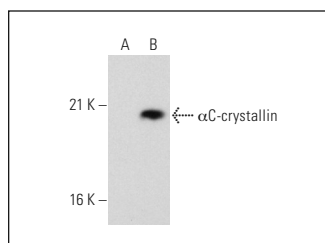
## APPLICATIONS

$\alpha$ C-crystallin (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive  $\alpha$ C-crystallin antibodies. Recommended use: 10-20  $\mu$ l per lane.

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

$\alpha$ C-crystallin (2H5): sc-51745 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse  $\alpha$ C-crystallin expression in  $\alpha$ C-crystallin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



$\alpha$ C-crystallin (2H5): sc-51745. Western blot analysis of  $\alpha$ C-crystallin expression in non-transfected: sc-117752 (A) and mouse  $\alpha$ C-crystallin transfected: sc-118175 (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](http://www.scbt.com) for detailed protocols and support products.