

α B-crystallin (10D5F4): sc-101437

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, α A-, α B- and α 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, α -crystallins do not renature these proteins. The gene encoding human α A-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 α B-crystallin gene maps to chromosome 11q23.1 and encodes a protein that is present in many tissues, including lens, heart and skeletal muscle. Elevated expression of α B-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

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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.
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CHROMOSOMAL LOCATION

Genetic locus: CRYAB (human) mapping to 11q23.1.

RESEARCH USE

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

SOURCE

α B-crystallin (10D5F4) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-175 of α B-crystallin of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

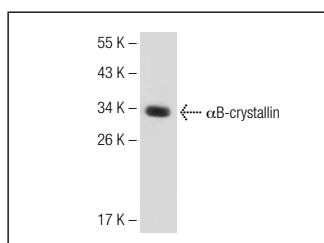
α B-crystallin (10D5F4) is recommended for detection of α B-crystallin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for α B-crystallin siRNA (h): sc-40432, α B-crystallin shRNA Plasmid (h): sc-40432-SH and α B-crystallin shRNA (h) Lentiviral Particles: sc-40432-V.

Molecular Weight of α B-crystallin: 23.5 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

DATA



α B-crystallin (10D5F4): sc-101437. Western blot analysis of full-length human recombinant α B-crystallin protein.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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