

βB1-crystallin (A-8): sc-374496

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 comprise a superfamily. Crystallins usually contain seven distinctive protein regions, including four homologous motifs, a connecting peptide, and N- and C-terminal extensions. β -crystallins constitute the major lens structural proteins, and they associate into dimers, tetramers, and higher order aggregates. The β -crystallin subfamily is composed of several gene products, including β A1-, β A2-, β A3-, β A4-, β B1-, β B2- and β B3-crystallin. The β A1- and β A3-crystallin proteins are encoded by a single mRNA. They differ by only 17 amino acids, and β A1-crystallin is generated by use of an alternate translation initiation site.

REFERENCES

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- Werten, P.J., et al. 1999. The short 5' untranslated region of the β A3/A1-crystallin mRNA is responsible for leaky ribosomal scanning. *Mol. Biol. Rep.* 26: 201-205.
- Evans, P., et al. 2004. The P23T cataract mutation causes loss of solubility of folded γ D-crystallin. *J. Mol. Biol.* 343: 435-444.
- Yang, Y., et al. 2004. Transcriptional regulation of mouse α B- and γ F-crystallin genes in lens: opposite promoter-specific interactions between Pax6 and large Maf transcription factors. *J. Mol. Biol.* 344: 351-368.
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CHROMOSOMAL LOCATION

Genetic locus: CRYBB1 (human) mapping to 22q12.1; Crybb1 (mouse) mapping to 5 F.

SOURCE

β B1-crystallin (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 65-103 within an internal region of β B1-crystallin of human origin.

PRODUCT

Each vial contains 200 μ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374496 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

β B1-crystallin (A-8) is recommended for detection of β B1-crystallin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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 β B1-crystallin siRNA (h): sc-40442, β B1-crystallin siRNA (m): sc-40443, β B1-crystallin shRNA Plasmid (h): sc-40442-SH, β B1-crystallin shRNA Plasmid (m): sc-40443-SH, β B1-crystallin shRNA (h) Lentiviral Particles: sc-40442-V and β B1-crystallin shRNA (m) Lentiviral Particles: sc-40443-V.

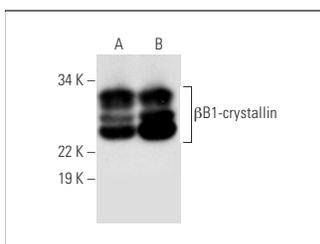
Molecular Weight of β B1-crystallin: 28 kDa.

Positive Controls: β B1-crystallin (h2): 293T Lysate: sc-128077, mouse eye extract: sc-364241 or rat eye extract: sc-364805.

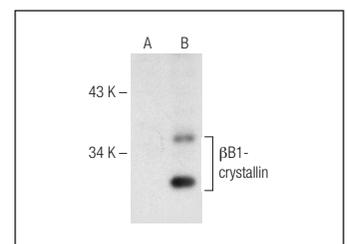
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



β B1-crystallin (A-8): sc-374496. Western blot analysis of β B1-crystallin expression in mouse eye (A) and rat eye (B) tissue extracts.



β B1-crystallin (A-8): sc-374496. Western blot analysis of β B1-crystallin expression in non-transfected: sc-117752 (A) and human β B1-crystallin transfected: sc-128077 (B) 293T whole cell lysates.

STORAGE

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

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.