SANTA CRUZ BIOTECHNOLOGY, INC.

βA2-crystallin (N-20): sc-22399

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 βA1-, βA2-, βA3-, βA4-, βB1-, βB2- and βB3-crystallin. The βA1- and βA3-crystallin proteins are encoded by a single mRNA. They differ by only 17 amino acids, and βA1-crystallin is generated by use of an alternate translation initiation site.

REFERENCES

1. Hope, J.N., et al. 1994. βA3/A1-crystallin association: role of the N-terminal arm. Protein Eng. 7: 445-451.
2. Hejtmancik, J.F., et al. 1997. Association properties of βB2- and βA3-crystallin: ability to form dimers. Protein Eng. 10: 1347-1352.
3. Werten, P.J., et al. 1999. The short 5' untranslated region of the βA3/A1-crystallin mRNA is responsible for leaky ribosomal scanning. Mol. Biol. Rep. 26: 201-205.
4. Slingsby, C., et al. 1999. Structure of the crystallins. Eye 13: 395-402.
5. Horwitz, J., 2003. α-crystallin. Exp. Eye Res. 76: 145-153.
6. Hejtmancik, J.F., et al. 2004. β-crystallin association. Exp. Eye Res. 79: 377-383.
7. Bhat, S.P. 2004. Transparency and non-refractive functions of crystallins—a proposal. Exp. Eye Res. 79: 809-816.
8. Paulin, D., et al. 2004. Desminopathies in muscle disease. J. Pathol. 204: 418-427.
9. LocusLink Report (LocusID: 1411). http://www.ncbi.nlm.nih.gov/LocusLink

CHROMOSOMAL LOCATION

Genetic locus: CRYBA2 (human) mapping to 2q35; Cryba2 (mouse) mapping to 1 C3.

SOURCE

βA2-crystallin (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of βA2-crystallin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22399 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

βA2-crystallin (N-20) is recommended for detection of βA2-crystallin of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

βA2-crystallin (N-20) is also recommended for detection of βA2-crystallin in additional species, including equine, canine and bovine.

Suitable for use as control antibody for βA2-crystallin siRNA (h): sc-40436, βA2-crystallin siRNA (m): sc-40437, βA2-crystallin shRNA Plasmid (h): sc-40436-SH, βA2-crystallin shRNA Plasmid (m): sc-40437-SH, βA2-crystallin shRNA (h) Lentiviral Particles: sc-40436-V and βA2-crystallin shRNA (m) Lentiviral Particles: sc-40437-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.