

α A-crystallin (G-20): sc-22388

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 (HSP20). 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. Expression of α A-crystallin is restricted to the lens. Defects in this gene cause autosomal dominant congenital cataract (ADCC). The human α B-crystallin gene product is expressed 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 cosegregated in a family with a desmin-related myopathy.

CHROMOSOMAL LOCATION

Genetic locus: CRYAA (human) mapping to 21q22.3; Cryaa (mouse) mapping to 17 B1.

SOURCE

α A-crystallin (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of α A-crystallin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-22388 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

α A-crystallin (G-20) is recommended for detection of α A-crystallin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

α A-crystallin (G-20) is also recommended for detection of α A-crystallin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for α A-crystallin siRNA (h): sc-40430, α A-crystallin siRNA (m): sc-40431, α A-crystallin shRNA Plasmid (h): sc-40430-SH, α A-crystallin shRNA Plasmid (m): sc-40431-SH, α A-crystallin shRNA (h) Lentiviral Particles: sc-40430-V and α A-crystallin shRNA (m) Lentiviral Particles: sc-40431-V.

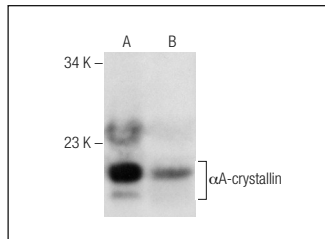
Molecular Weight of α A-crystallin: 20 kDa.

Positive Controls: Y79 cell lysate: sc-2240, mouse eye tissue extract or rat eye tissue extract.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



α A-crystallin (G-20): sc-22388. Western blot analysis of α A-crystallin expression in rat eye (A) and mouse eye (B) tissue extracts.

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.

MONOS
Satisfaction
Guaranteed

Try **α A-crystallin (B-2): sc-28306** or **α A-crystallin (H-4): sc-398304**, our highly recommended monoclonal alternatives to α A-crystallin (G-20).