

# $\gamma$ A-crystallin (C-12): sc-82603

## BACKGROUND

Crystallins, the major proteins of the vertebrate eye lens, are responsible for maintaining the transparency and the refractive index of the lens. Crystallins are divided into  $\alpha$ ,  $\beta$  and  $\gamma$  families, all of which usually contain seven distinctive protein regions, including four homologous motifs, one connecting peptide, and N- and C-terminal extensions. The  $\gamma$ -crystallin family is comprised of seven closely related proteins designated  $\gamma$ A-,  $\gamma$ B-,  $\gamma$ C-,  $\gamma$ D-,  $\gamma$ E-,  $\gamma$ F- and  $\gamma$ G-crystallin.  $\gamma$ A-crystallin, also known as CRYGA, CRYG5 or CRYG1, is a 174 amino acid member of the  $\gamma$ -crystallin family. Functioning as a monomer that has a two-domain  $\beta$  fold,  $\gamma$ A-crystallin, like other members of its family, plays a key role in ensuring the proper structure of the vertebrate eye lens. Defects in the gene encoding  $\gamma$ A-crystallin are associated with the formation of cataracts which are characterized by a clouding of the crystalline lens of the eye.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: CRYGA (human) mapping to 2q34.

## SOURCE

$\gamma$ A-crystallin (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of  $\gamma$ A-crystallin of human origin.

## STORAGE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-82603 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

$\gamma$ A-crystallin (C-12) is recommended for detection of  $\gamma$ A-crystallin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\gamma$ A-crystallin siRNA (h): sc-40450,  $\gamma$ A-crystallin shRNA Plasmid (h): sc-40450-SH and  $\gamma$ A-crystallin shRNA (h) Lentiviral Particles: sc-40450-V.

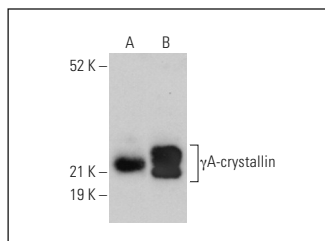
Molecular Weight of  $\gamma$ A-crystallin: 21 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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



$\gamma$ A-crystallin (C-12): sc-82603. Western blot analysis of  $\gamma$ A-crystallin expression in rat eye tissue extract (A) and Hep G2 whole cell lysate (B).

## 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) or our catalog for detailed protocols and support products.