

# $\gamma$ S-crystallin (C-12): sc-103180

## BACKGROUND

Crystallins are water soluble structural proteins found in the vertebrate eye. Mammalian crystallins are classified in three forms, designated  $\alpha$ ,  $\beta$  and  $\gamma$ . Crystallins, as the principal components of the lens, function to increase the refractive index of the eye during accommodation by forming high-molecular weight aggregates which maintain transparency.  $\gamma$ S-crystallin ( $\gamma$ -crystallin S), also known as  $\beta$ -crystallin S, is a 178 amino acid protein that exists as a monomer which does not aggregate.  $\gamma$ S-crystallin contains a two-domain  $\beta$  structure and belongs to the  $\beta/\gamma$ -crystallin gene family mapping to human chromosome 3.  $\gamma$ S-crystallin has been linked to congenital cataract development, a disorder signified by increasing levels of lens opacity.

## REFERENCES

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- Wistow, G., Sardarian, L., Gan, W. and Wyatt, M.K. 2000. The human gene for  $\gamma$ S-crystallin: alternative transcripts and expressed sequences from the first intron. *Mol. Vis.* 6: 79-84.
- Purkiss, A.G., Bateman, O.A., Goodfellow, J.M., Lubsen, N.H. and Slingsby, C. 2002. The X-ray crystal structure of human  $\gamma$ S-crystallin C-terminal domain. *J. Biol. Chem.* 277: 4199-4205.

## CHROMOSOMAL LOCATION

Genetic locus: CRYGS (human) mapping to 3q27.3; Crygs (mouse) mapping to 16 B1.

## SOURCE

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

## 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-103180 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

$\gamma$ S-crystallin (C-12) is recommended for detection of  $\gamma$ S-crystallin of mouse, rat and 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).

$\gamma$ S-crystallin (C-12) is also recommended for detection of  $\gamma$ S-crystallin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for  $\gamma$ S-crystallin siRNA (h): sc-40464,  $\gamma$ S-crystallin siRNA (m): sc-40465,  $\gamma$ S-crystallin shRNA Plasmid (h): sc-40464-SH,  $\gamma$ S-crystallin shRNA Plasmid (m): sc-40465-SH,  $\gamma$ S-crystallin shRNA (h) Lentiviral Particles: sc-40464-V and  $\gamma$ S-crystallin shRNA (m) Lentiviral Particles: sc-40465-V.

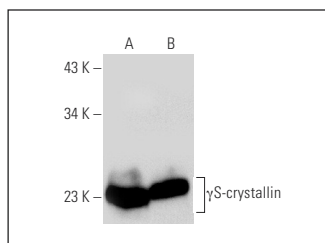
Molecular Weight of  $\gamma$ S-crystallin: 21 kDa.

Positive Controls: mouse eye extract: sc-364241 or rat eye extract: sc-364805.

## 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



$\gamma$ S-crystallin (C-12): sc-103180. Western blot analysis of  $\gamma$ S-crystallin expression in mouse eye (A) and rat eye (B) tissue extracts.

## 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.