

# $\gamma$ D-crystallin (SB-18): sc-100697

## 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  $\alpha$ ,  $\beta$  and  $\gamma$  families, and the  $\beta$  and  $\gamma$ -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.  $\gamma$ -crystallins are structural proteins in the lens, and they exist as monomers which typically lack connecting peptides and terminal extensions. The  $\gamma$ -crystallins include seven closely related proteins, namely  $\gamma$ A-,  $\gamma$ B-,  $\gamma$ C-,  $\gamma$ D-,  $\gamma$ E-,  $\gamma$ F- and  $\gamma$ G-crystallin, as well as the  $\gamma$ N and  $\gamma$ S-crystallin proteins. The  $\gamma$ -crystallins are differentially regulated after early development, and are involved in cataract formation as a result of either age-related protein degradation or genetic mutation.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: CRYGD (human) mapping to 2q33.3; Crygd (mouse) mapping to 1 C2.

## SOURCE

$\gamma$ D-crystallin (SB-18) is a mouse monoclonal antibody raised against recombinant  $\gamma$ D-crystallin of human origin.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

$\gamma$ D-crystallin (SB-18) is recommended for detection of  $\gamma$ D-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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for  $\gamma$ D-crystallin siRNA (h): sc-40456,  $\gamma$ D-crystallin siRNA (m): sc-40457,  $\gamma$ D-crystallin shRNA Plasmid (h): sc-40456-SH,  $\gamma$ D-crystallin shRNA Plasmid (m): sc-40457-SH,  $\gamma$ D-crystallin shRNA (h) Lentiviral Particles: sc-40456-V and  $\gamma$ D-crystallin shRNA (m) Lentiviral Particles: sc-40457-V.

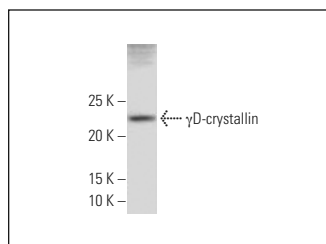
Molecular Weight of  $\gamma$ D-crystallin: 20 kDa.

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

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



$\gamma$ D-crystallin (SB-18): sc-100697. Western blot analysis of  $\gamma$ D-crystallin expression in Hep G2 whole cell lysate.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.