

# Filensin (UR12): sc-69690

## BACKGROUND

Filensin, also referred to as CP94, CP95, CP97, is an eye lens fiber, membrane-associated, cytoskeletal intermediate filament (IF) protein that is required for the assembly of beaded filaments, cytoskeletal networks that are necessary for the long-term maintenance of optical clarity. Phakinin copolymerizes with Filensin to make up the filamentous structures present in the beaded filaments. Filensin is also crucial for lens development since it regulates lens fiber cell shape conformation and lens transparency. Filensin contains a C-terminal non- $\alpha$ -helical domain that contributes in several ways to its function. The head domain of Filensin includes a di-arginine/aromatic amino acid motif that contains a potential protein kinase A phosphorylation site.

## REFERENCES

1. Sandilands, A., et al. 1995. Filensin is proteolytically processed during lens fiber cell differentiation by multiple independent pathways. *Eur. J. Cell Biol.* 67: 238-253.
2. Goulielmos, G., et al. 1996. Filensin and Phakinin form a novel type of beaded intermediate filaments and coassemble *de novo* in cultured cells. *J. Cell Biol.* 132: 643-655.
3. Gounari, F., et al. 1997. The mouse Filensin gene: structure and evolutionary relation to other intermediate filament genes. *FEBS Lett.* 413: 371-378.
4. Masaki, S. and Quinlan, R.A. 1997. Gene structure and sequence comparisons of the eye lens specific protein, Filensin, from rat and mouse: implications for protein classification and assembly. *Gene* 201: 11-20.
5. Masaki, S., et al. 1998. Identification and functional analysis of the mouse lens Filensin gene promoter. *Gene* 214: 77-86.

## CHROMOSOMAL LOCATION

Genetic locus: BFSP1 (human) mapping to 20p12.1; Bfsp1 (mouse) mapping to 2 G1.

## SOURCE

Filensin (UR12) is a mouse monoclonal antibody raised against lens filament of bovine origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Filensin (UR12) is available conjugated to agarose (sc-69690 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-69690 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69690 PE), fluorescein (sc-69690 FITC), Alexa Fluor<sup>®</sup> 488 (sc-69690 AF488), Alexa Fluor<sup>®</sup> 546 (sc-69690 AF546), Alexa Fluor<sup>®</sup> 594 (sc-69690 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-69690 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-69690 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-69690 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

Filensin (UR12) is recommended for detection of Filensin of mouse and rat 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Filensin (UR12) is also recommended for detection of Filensin in additional species, including bovine.

Suitable for use as control antibody for Filensin siRNA (h): sc-62320, Filensin siRNA (m): sc-62321, Filensin shRNA Plasmid (h): sc-62320-SH, Filensin shRNA Plasmid (m): sc-62321-SH, Filensin shRNA (h) Lentiviral Particles: sc-62320-V and Filensin shRNA (m) Lentiviral Particles: sc-62321-V.

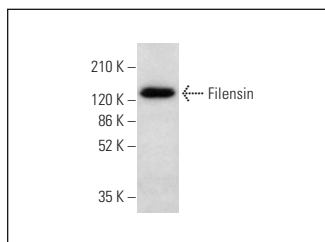
Molecular Weight of Filensin: 115 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## 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). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Filensin (UR12): sc-69690. Western blot analysis of Filensin expression in NIH/3T3 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.

## 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) for detailed protocols and support products.