SANTA CRUZ BIOTECHNOLOGY, INC.

opticin (F-2): sc-271306

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic α/β horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRR repeats contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. Opticin, also known as OPTC or OPT, is a 332 amino acid protein that is secreted into the extracellular matrix and contains seven LRR repeats. Expressed in skin and fetal liver and also present in ocular tissues, such as the retina, cornea and iris, opticin functions to bind collagen fibrils and, via this interaction, is thought to regulate fibril spacing, morphology and organization. Opticin is subject to posttranslational O-glycosylation and may be associated with the pathogenesis of primary open angle glaucoma.

REFERENCES

1. Reardon, A.J., et al. 2000. Identification in vitreous and molecular cloning of opticin, a novel member of the family of leucine-rich repeat proteins of the extracellular matrix. J. Biol. Chem. 275: 2123-2129.
2. Hobby, P., et al. 2000. Cloning, modeling, and chromosomal localization for a small leucine-rich repeat proteoglycan (SLRP) family member expressed in human eye. Mol. Vis. 6: 72-78.
3. Friedman, J.S., et al. 2002. Protein localization in the human eye and genetic screen of opticin. Hum. Mol. Genet. 11: 1333-1342.
4. Le Goff, M.M., et al. 2003. Characterization of opticin and evidence of stable dimerization in solution. J. Biol. Chem. 278: 45280-45287.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 605127. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: OPTC (human) mapping to 1q32.1; Optc (mouse) mapping to 1 E4.

SOURCE

opticin (F-2) is a mouse monoclonal antibody raised against amino acids 191-275 mapping within an internal region of opticin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

opticin (F-2) is available conjugated to agarose (sc-271306 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271306 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271306 PE), fluorescein (sc-271306 FITC), Alexa Fluor® 488 (sc-271306 AF488), Alexa Fluor® 546 (sc-271306 AF546), Alexa Fluor® 594 (sc-271306 AF594) or Alexa Fluor® 647 (sc-271306 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271306 AF680) or Alexa Fluor® 790 (sc-271306 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

opticin (F-2) is recommended for detection of opticin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 opticin siRNA (h): sc-75996, opticin siRNA (m): sc-75997, opticin shRNA Plasmid (h): sc-75996-SH, opticin shRNA Plasmid (m): sc-75997-SH, opticin shRNA (h) Lentiviral Particles: sc-75996-V and opticin shRNA (m) Lentiviral Particles: sc-75997-V.

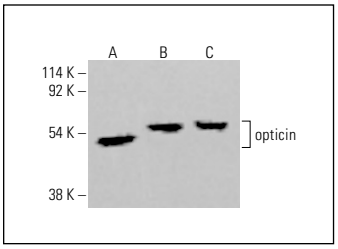
Molecular Weight of opticin: 45 kDa.

Positive Controls: ARPE-19 whole cell lysate: sc-364357, Y79 cell lysate: sc-2240 or Hs 732.Sk/Mu whole cell lysate: sc-364362.

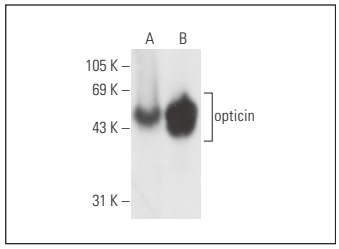
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



opticin (F-2): sc-271306. Western blot analysis of opticin expression in HeLa (**A**), K-562 (**B**) and HCT-116 (**C**) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



opticin (F-2): sc-271306. Western blot analysis of opticin expression in ARPE-19 (**A**) and Hs 732.Sk/Mu (**B**) whole cell lysates.

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 for detailed protocols and support products.