

Optineurin (8): sc-136364

BACKGROUND

Optineurin, also designated FIP2, E3-14.7K-interacting protein, HYPL, transcription factor IIIA-interacting protein (TFIIIA-INTP), Huntingtin interacting protein L and NEMO-related protein, influences cell morphogenesis, membrane trafficking, vesicle trafficking and transcription activation through its interactions with the Rab8, Huntingtin and transcription factor IIIA proteins. Optineurin interacts with Adenovirus E3-14.7K protein and may utilize TNF α or FAS-ligand pathways to mediate apoptosis, inflammation or vasoconstriction. Optineurin mutations may impart normal-tension glaucoma and adult-onset primary open angle glaucoma. Optineurin is a 617 amino acid protein that contains leucine zippers and leucine-rich regions, and contains a potential Cys2-His-Cys zinc finger at residues 553-582. It localizes to the Golgi apparatus. RT-PCR studies indicate expression in human trabecular meshwork, nonpigmented ciliary epithelium, retina, brain, adrenal cortex, liver, fetus, lymphocyte and fibroblast. Northern blot studies indicate a 2.0 kb transcript in human trabecular meshwork and nonpigmented ciliary epithelium and a minor 3.6 kb transcript.

REFERENCES

- Li, Y., et al. 1998. Interaction of an adenovirus E3-14.7K protein with a novel tumor necrosis factor α -inducible cellular protein containing leucine zipper domains. *Mol. Cell. Biol.* 18: 1601-1610.
- Moreland, R.J., et al. 2000. Identification of a transcription factor IIIA-interacting protein. *Nucleic Acids Res.* 28: 1986-1993.
- Schwamborn, K., et al. 2000. Phorbol esters and cytokines regulate the expression of the NEMO-related protein, a molecule involved in a NF κ B-independent pathway. *J. Biol. Chem.* 275: 22780-22789.
- Rezaie, T., et al. 2002. Adult-onset primary open-angle glaucoma caused by mutations in Optineurin. *Science* 295: 1077-1079.
- Vittitow, J., et al. 2002. Expression of Optineurin, a glaucoma-linked gene, is influenced by elevated intraocular pressure. *Biochem. Biophys. Res. Commun.* 298: 67-74.

CHROMOSOMAL LOCATION

Genetic locus: OPTN (human) mapping to 10p13.

SOURCE

Optineurin (8) is a mouse monoclonal antibody raised against amino acids 125-245 of Optineurin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

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. Not for resale.

APPLICATIONS

Optineurin (8) is recommended for detection of Optineurin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Optineurin siRNA (h): sc-39054, Optineurin shRNA Plasmid (h): sc-39054-SH and Optineurin shRNA (h) Lentiviral Particles: sc-39054-V.

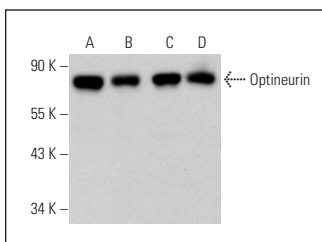
Molecular Weight of Optineurin: 74 kDa.

Positive Controls: SW480 cell lysate: sc-2219, HeLa nuclear extract: sc-2120 or HeLa whole cell lysate: sc-2200.

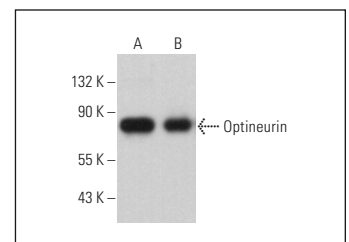
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Optineurin (8): sc-136364. Western blot analysis of Optineurin expression in HeLa (A), SW480 (B), A-673 (C) and SJRH30 (D) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



Optineurin (8): sc-136364. Western blot analysis of Optineurin expression in SW480 whole cell lysate (A) and HeLa nuclear extract (B).

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.