

Optineurin (K-14): sc-48901

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

1. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602432. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Rezaie, T., et al. 2005. Molecular cloning and expression profiling of Opti-neurin in the rhesus monkey. *Invest. Ophthalmol. Vis. Sci.* 46: 2404-2410.
3. Aung, T., et al. 2005. Clinical features and course of patients with glaucoma with the E50K mutation in the Optineurin gene. *Invest. Ophthalmol. Vis. Sci.* 46: 2816-2822.
4. Jansson, M., et al. 2005. Analysis of rare variants and common haplotypes in the Optineurin gene in Swedish glaucoma cases. *Ophthalmic Genet.* 26: 85-89.

CHROMOSOMAL LOCATION

Genetic locus: OPTN (human) mapping to 10p13; Optn (mouse) mapping to 2 A1.

SOURCE

Optineurin (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Optineurin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48901 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Optineurin (K-14) is recommended for detection of Optineurin of mouse, rat and 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)], 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 Optineurin siRNA (h): sc-39054, Optineurin siRNA (m): sc-39055, Optineurin siRNA (r): sc-60013, Optineurin shRNA Plasmid (h): sc-39054-SH, Optineurin shRNA Plasmid (m): sc-39055-SH, Optineurin shRNA Plasmid (r): sc-60013-SH, Optineurin shRNA (h) Lentiviral Particles: sc-39054-V, Optineurin shRNA (m) Lentiviral Particles: sc-39055-V and Optineurin shRNA (r) Lentiviral Particles: sc-60013-V.

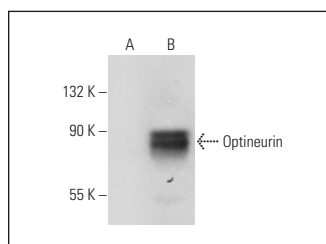
Molecular Weight of Optineurin: 67 kDa.

Positive Controls: Optineurin (h2): 293T Lysate: sc-170133.

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



Optineurin (K-14): sc-48901. Western blot analysis of Optineurin expression in non-transfected: sc-117752 (A) and human Optineurin transfected: sc-170133 (B) 293T whole cell lysates.

RESEARCH USE

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

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Try **Optineurin (C-2): sc-166576** or **Optineurin (C-1): sc-271549**, our highly recommended monoclonal alternatives to Optineurin (K-14).