SANTA CRUZ BIOTECHNOLOGY, INC.

Optineurin (h): 293T Lysate: sc-114995

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 TNFα 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

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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.
5. Rezaie, T., et al. 2005. Molecular cloning, genomic structure and protein characterization of mouse Optineurin. Genomics 85: 131-138.
6. Sahlender, D.A., et al. 2005. Optineurin links Myosin VI to the Golgi complex and is involved in Golgi organization and exocytosis. J. Cell Biol. 169: 285-295.
7. De Marco, N., et al. 2006. Optineurin increases cell survival and translocates to the nucleus in a Rab 8-dependent manner upon an apoptotic stimulus. J. Biol. Chem. 281: 16147-16156.
8. Yao, H.Y., et al. 2006. Polymorphisms of myocilin and Optineurin in primary open angle glaucoma patients. Zhonghua Yi Xue Za Zhi 86: 554-559.
9. Yasuda, N., et al. 2006. Low penetrance of His26Asp mutation in the Optineurin gene in a Japanese family with normal-tension glaucoma. Nippon Ganka Gakkai Zasshi 110: 594-600.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

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

PRODUCT

Optineurin (h): 293T Lysate represents a lysate of human Optineurin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Optineurin (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Optineurin antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.