SANTA CRUZ BIOTECHNOLOGY, INC.

WIPI-1 (38-W): sc-100901

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The Power to Question

BACKGROUND

WIPI-1 (WD repeat domain, phosphoinositide interacting-1), also known as WIPI1, ATG18 or WIPI49, is a 446 amino acid protein that localizes to cytoplasmic vesicles, endosomes, clathrin-coated vesicles and the *trans*-Golgi network. Ubiquitously expressed with highest expression in heart, testis, placenta, pancreas and skeletal muscle, WIPI-1 is thought to play a role in autophagy and may regulate protein trafficking in certain recycling pathways. In addition, WIPI-1 interacts with androgen and estrogen receptors (ARs and ERs, respectively) and, through this interaction, may modify receptor function. WIPI-1 contains three WD repeats and has a 7-bladed propeller structure with a conserved motif that facilitates its interaction with other proteins. WIPI-1 is expressed as two isoforms, designated α and β, and its expression is upregulated in a variety of tumors, suggesting a role in carcinogenesis.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609224. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Proikas-Cezanne, T., et al. 2004. WIPI-1α (WIPI49), a member of the novel 7-bladed WIPI protein family, is aberrantly expressed in human cancer and is linked to starvation-induced autophagy. Oncogene 23: 9314-9325.
3. Jeffries, T.R., et al. 2004. PtdIns-specific MPR pathway association of a novel WD40 repeat protein, WIPI49. Mol. Biol. Cell 15: 2652-2663.
4. Wojnarowicz, P.M., et al. 2007. Construction of a chromosome 17 transcriptome in serous ovarian cancer identifies differentially expressed genes. Int. J. Gynecol. Cancer 18: 963-975.
5. Proikas-Cezanne, T., et al. 2007. Human WIPI-1 puncta-formation: a novel assay to assess mammalian autophagy. FEBS Lett. 581: 3396-3404.
6. Seelan, R.S., et al. 2008. Deciphering the lithium transcriptome: microarray profiling of lithium-modulated gene expression in human neuronal cells. Neuroscience 151: 1184-1197.

CHROMOSOMAL LOCATION

Genetic locus: WIPI1 (human) mapping to 17q24.2; Wipi1 (mouse) mapping to 11 E1.

SOURCE

WIPI-1 (38-W) is a mouse monoclonal antibody raised against recombinant WIPI-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of 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.

APPLICATIONS

WIPI-1 (38-W) is recommended for detection of WIPI-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for WIPI-1 siRNA (h): sc-72210, WIPI-1 siRNA (m): sc-72211, WIPI-1 shRNA Plasmid (h): sc-72210-SH, WIPI-1 shRNA Plasmid (m): sc-72211-SH, WIPI-1 shRNA (h) Lentiviral Particles: sc-72210-V and WIPI-1 shRNA (m) Lentiviral Particles: sc-72211-V.

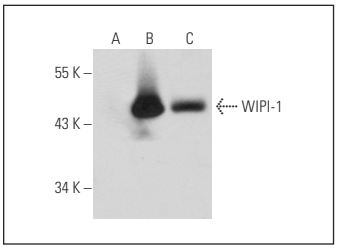
Molecular Weight of WIPI-1: 49 kDa.

Positive Controls: WIPI-1 (h): 293T lysate: sc-115851 or PC-12 cell lysate: sc-2250.

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).

DATA



WIPI-1 (38-W): sc-100901. Western blot analysis of WIPI-1 expression in non-transfected 293T: sc-117752 (**A**), human WIPI-1 transfected 293T: sc-115851 (**B**) and PC-12 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Phadwal, K., et al. 2012. A novel method for autophagy detection in primary cells: impaired levels of macroautophagy in immunosenescent T cells. Autophagy 8: 677-689.
2. Huang, T., et al. 2018. SRGAP1, a crucial target of miR-340 and miR-124, functions as a potential oncogene in gastric tumorigenesis. Oncogene 37: 1159-1174.

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.