SANTA CRUZ BIOTECHNOLOGY, INC.

Op18 (FL-149): sc-20796

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Op18 (for oncoprotein 18, also designated stathmin, prosolin or metablastin) is a conserved, tubulin-associated, intracellular phosphoprotein. Many different phosphorylated forms of Op18 are observed, and it is expressed as two different isoforms. Op18 is considered a critical regulator of microtubulin dynamics and is downregulated by p53. It serves as a transducing protein, via phosphorylation, for a variety of cell signaling pathways and is involved in both mitosis and differentiation. Op18 is present in many cancers, including breast carcinomas, and is highly expressed in acute leukemias of different subtypes.

REFERENCES

1. Beretta, L., et al. 1989. Identification of two distinct isoforms of stathmin and characterization of their respective phosphorylated forms. J. Biol. Chem. 264: 9932-9938.
2. Sobel, A. 1991. Stathmin: a relay phosphoprotein for multiple signal transduction? Trends Biochem. Sci. 16: 301-315.
3. Roos, G., et al. 1993. Expression of Oncoprotein 18 in human leukemias and lymphomas. Leukemia 7: 1538-1546.
4. Belmont, L.D. and Mitchison, T.J. 1996. Identification of a protein that interacts with tubulin dimers and increases the catastrophe rate of microtubules. Cell 84: 623-631.
5. Jourdain, L., et al. 1997. Stathmin: a tubulin-sequestering protein which forms a ternary T2S complex with two tubulin molecules. Biochemistry 36: 10817-10821.

SOURCE

Op18 (FL-149) is a rabbit polyclonal antibody raised against amino acids 1-149 representing full length Op18 of human origin.

PRODUCT

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

APPLICATIONS

Op18 (FL-149) is recommended for detection of Op18 and other stathmin family members including stathmin-like protein RB3 and SCG10-like protein 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)], 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).

Op18 (FL-149) is also recommended for detection of Op18 and other stathmin family members including stathmin-like protein RB3 and SCG10-like protein in additional species, including equine, canine, bovine and porcine.

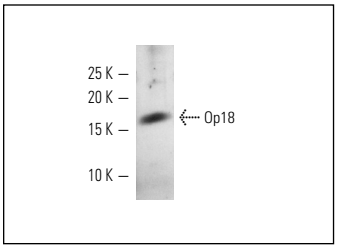
Molecular Weight of Op18: 19 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, K-562 whole cell lysate: sc-2203 or SK-MEL-28 cell lysate: sc-2236.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Op18 (FL-149): sc-20796. Western blot analysis of Op18 expression in SK-MEL-28 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Neben, K., et al. 2004. Microarray-based screening for molecular markers in medulloblastoma revealed STK15 as independent predictor for survival. Cancer Res. 64: 3103-3111.
2. Zada, A.A., et al. 2006. Proteomic analysis of acute promyelocytic leukemia: PML-RARα leads to decreased phosphorylation of Op18 at serine 63. Proteomics 6: 5705-5719.
3. Chen, Y., et al. 2007. Proteomic analysis of EZH2 downstream target proteins in hepatocellular carcinoma. Proteomics 7: 3097-3104.
4. Chen, Y., et al. 2007. Lentivirus-mediated RNA interference targeting enhancer of zeste homolog 2 inhibits hepatocellular carcinoma growth through down-regulation of stathmin. Hepatology 46: 200-208.
5. Jiang, L., et al. 2009. Down-regulation of stathmin is required for TGFβ inducible early gene 1 induced growth inhibition of pancreatic cancer cells. Cancer Lett. 274: 101-108.
6. Björklund, P., et al. 2010. Stathmin as a marker for malignancy in pheochromocytomas. Exp. Clin. Endocrinol. Diabetes 118: 27-30.
7. Gimigliano, A., et al. 2012. Proteomic profile identifies dysregulated pathways in Cornelia de Lange syndrome cells with distinct mutations in SMC1A and SMC3 genes. J. Proteome Res. 11: 6111-6123.

RESEARCH USE

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