

Op18 (E-3): sc-55531

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.

CHROMOSOMAL LOCATION

Genetic locus: STMN1 (human) mapping to 1p36.11; Stmn1 (mouse) mapping to 4 D3.

SOURCE

Op18 (E-3) is a mouse monoclonal antibody raised against amino acids 1-149 representing full length Op18 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Op18 (E-3) is available conjugated to agarose (sc-55531 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55531 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55531 PE), fluorescein (sc-55531 FITC), Alexa Fluor® 488 (sc-55531 AF488), Alexa Fluor® 546 (sc-55531 AF546), Alexa Fluor® 594 (sc-55531 AF594) or Alexa Fluor® 647 (sc-55531 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55531 AF680) or Alexa Fluor® 790 (sc-55531 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Op18 (E-3) is recommended for detection of Op18 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Op18 siRNA (h): sc-36127, Op18 siRNA (m): sc-36128, Op18 shRNA Plasmid (h): sc-36127-SH, Op18 shRNA Plasmid (m): sc-36128-SH, Op18 shRNA (h) Lentiviral Particles: sc-36127-V and Op18 shRNA (m) Lentiviral Particles: sc-36128-V.

Molecular Weight of Op18: 19 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or MDA-MB-231 cell lysate: sc-2232.

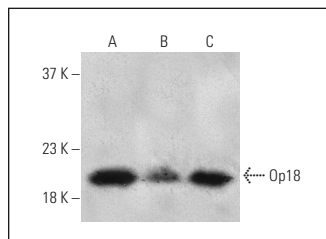
RESEARCH USE

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

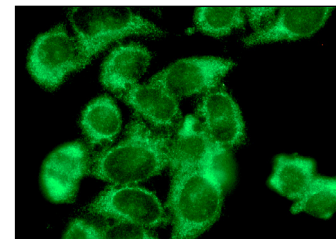
STORAGE

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

DATA



Op18 (E-3) HRP: sc-55531 HRP. Direct western blot analysis of Op18 expression in Jurkat (A), MDA-MB-231 (B) and K-562 (C) whole cell lysates.



Op18 (E-3): sc-55531. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Phadke, A.P., et al. 2011. *In vivo* safety and antitumor efficacy of bifunctional small hairpin RNAs specific for the human Stathmin 1 oncoprotein. *DNA Cell Biol.* 30: 715-726.
- Cao, J.Y., et al. 2012. Changes in the nasopharyngeal carcinoma nuclear proteome induced by the EBNA1 protein of Epstein-Barr virus reveal potential roles for EBNA1 in metastasis and oxidative stress responses. *J. Virol.* 86: 382-394.
- Lazarini, M., et al. 2013. ARHGAP21 is a RhoGAP for RhoA and RhoC with a role in proliferation and migration of prostate adenocarcinoma cells. *Biochim. Biophys. Acta* 1832: 365-374.
- Machado-Neto, J.A., et al. 2014. Stathmin 1 is involved in the highly proliferative phenotype of high-risk myelodysplastic syndromes and acute leukemia cells. *Leuk. Res.* 38: 251-257.
- Machado-Neto, J.A., et al. 2015. Stathmin 1 inhibition amplifies ruxolitinib-induced apoptosis in JAK2V617F cells. *Oncotarget* 6: 29573-29584.
- Barbutti, I., et al. 2016. CATS (FAM64A) abnormal expression reduces clonogenicity of hematopoietic cells. *Oncotarget* 7: 68385-68396.
- Morris, E.J., et al. 2017. Stat3 regulates centrosome clustering in cancer cells via Stathmin/PLK1. *Nat. Commun.* 8: 15289.
- Lorenzon, I., et al. 2019. Identification and characterization of a new platinum-induced TP53 mutation in MDAH ovarian cancer cells. *Cells* 9: 36.
- Pereira-Martins, D.A., et al. 2021. MLL5 improves ATRA driven differentiation and promotes xenotransplant engraftment in acute promyelocytic leukemia model. *Cell Death Dis.* 12: 371.

PROTOCOLS

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