SANTA CRUZ BIOTECHNOLOGY, INC.

MOAP1 (G-2): sc-374286

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MOAP1 (modulator of apoptosis 1) is a 352 amino acid protein encoded by the human gene MOAP1. MOAP1 belongs to the PNMA family and contains one BH3-like domain and one RASSF1-binding domain. It is required for death receptor-dependent apoptosis. When MOAP1 is associated with RASSF1, it promotes a Bax conformational change and translocation to mitochondrial membranes in response to TNF and TNFSF10 stimulation. MOAP1 is a homodimer and, under normal circumstances, is held in an inactive conformation by an intramolecular interaction. Binding to RASSF1 isoform A (RASSF1A) relieves this inhibitory interaction and allows further binding to Bax. MOAP1 will also bind to Bcl-2 and Bcl-x.

REFERENCES

1. Tan, K.O., et al. 2001. MAP-1, a novel proapoptotic protein containing a BH3-like motif that associates with Bax through its Bcl-2 homology domains. J. Biol. Chem. 276: 2802-2807.
2. Tan, K.O., et al. 2005. MAP-1 is a mitochondrial effector of Bax. Proc. Natl. Acad. Sci. USA 102: 14623-14628.
3. Baksh, S., et al. 2005. The tumor suppressor RASSF1A and MAP-1 link death receptor signaling to Bax conformational change and cell death. Mol. Cell 18: 637-650.
4. Tretyakova, I., et al. 2005. Nuclear export factor family protein participates in cytoplasmic mRNA trafficking. J. Biol. Chem. 280: 31981-31990.
5. Schüller, M., et al. 2005. The human PNMA family: novel neuronal proteins implicated in paraneoplastic neurological disease. J. Neuroimmunol. 169: 172-176.
6. Vos, M.D., et al. 2006. The RASSF1A tumor suppressor activates Bax via MOAP1. J. Biol. Chem. 281: 4557-4563.
7. Fu, N.Y., et al. 2007. Inhibition of ubiquitin-mediated degradation of MOAP1 by apoptotic stimuli promotes Bax function in mitochondria. Proc. Natl. Acad. Sci. USA 104: 10051-10056.

CHROMOSOMAL LOCATION

Genetic locus: Moap1 (mouse) mapping to 12 E.

SOURCE

MOAP1 (G-2) is a mouse monoclonal antibody raised against amino acids 303-352 mapping at the C-terminus of MOAP1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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

MOAP1 (G-2) is recommended for detection of MOAP1 of mouse and rat 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 MOAP1 siRNA (m): sc-62630, MOAP1 shRNA Plasmid (m): sc-62630-SH and MOAP1 shRNA (m) Lentiviral Particles: sc-62630-V.

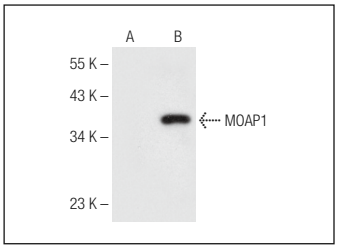
Molecular Weight of MOAP1: 40 kDa.

Positive Controls: A-10 cell lysate: sc-3806, PC-12 cell lysate: sc-2250 or MOAP1 (m): 293T Lysate: sc-121704.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MOAP1 (G-2): sc-374286. Western blot analysis of MOAP1 expression in non-transfected: sc-117752 (**A**) and mouse MOAP1 transfected: sc-121704 (**B**) 293T whole cell lysates.

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.