

MOAP1 (A-11): sc-271338

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, 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.

CHROMOSOMAL LOCATION

Genetic locus: MOAP1 (human) mapping to 14q32.12.

SOURCE

MOAP1 (A-11) is a mouse monoclonal antibody raised against amino acids 96-166 mapping within an internal region of MOAP1 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.

MOAP1 (A-11) is available conjugated to agarose (sc-271338 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271338 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271338 PE), fluorescein (sc-271338 FITC), Alexa Fluor® 488 (sc-271338 AF488), Alexa Fluor® 546 (sc-271338 AF546), Alexa Fluor® 594 (sc-271338 AF594) or Alexa Fluor® 647 (sc-271338 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271338 AF680) or Alexa Fluor® 790 (sc-271338 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

MOAP1 (A-11) is recommended for detection of MOAP1 of 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 MOAP1 siRNA (h): sc-62629, MOAP1 shRNA Plasmid (h): sc-62629-SH and MOAP1 shRNA (h) Lentiviral Particles: sc-62629-V.

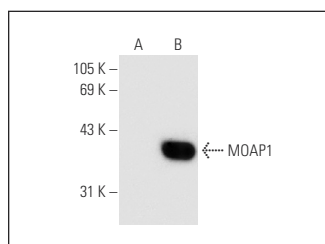
Molecular Weight of MOAP1: 40 kDa.

Positive Controls: MOAP1 (h): 293 Lysate: sc-112238.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPHRP-FITC: sc-516140 or m-IgGκ BPHRP-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 (A-11): sc-271338. Western blot analysis of MOAP1 expression in non-transfected: sc-110760 (A) and human MOAP1 transfected: sc-112238 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lee, Y.H., et al. 2020. Tricistronic expression of MOAP-1, Bax and RASSF1A in cancer cells enhances chemo-sensitization that requires BH3L domain of MOAP-1. *J. Cancer Res. Clin. Oncol.* 146: 1751-1764.
2. Simon, S.E., et al. 2022. α-mangostin activates MOAP-1 tumor suppressor and mitochondrial signaling in MCF-7 human breast cancer cells. *Evid. Based Complement. Alternat. Med.* 2022: 7548191.

STORAGE

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