

Fap-1 (H-300): sc-15356

BACKGROUND

In contrast to the growth factors which promote cell proliferation, FAS ligand (Fas-L) and the tumor necrosis factors (TNFs) rapidly induce apoptosis. Cellular response to Fas-L and TNF is mediated by structurally-related receptors containing a conserved "death domain" belonging to the TNF receptor superfamily. Putative downstream receptors of FAS include TRADD, FADD and RIP. A novel protein tyrosine phosphatase, Fap-1 (for FAS-associated phosphatase) (originally designated PTP-BAS), has been shown to associate with the carboxy-terminus 15 amino acids of FAS. Three isoforms of the protein result from alternative RNA splicings, the longest of which encodes a protein 2,485 amino acids in length. Although lacking a transmembrane region, Fap-1 does contain a membrane-binding domain, similar to that found in cytoskeleton-associated proteins such as ezerin. Fap-1 does not seem to associate with CD40 or death domain proteins such as TNF-RI and TNF-RII.

CHROMOSOMAL LOCATION

Genetic locus: PTPN13 (human) mapping to 4q21.3; Ptpn13 (mouse) mapping to 5 E5.

SOURCE

Fap-1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Fap-1 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

Fap-1 (H-300) is recommended for detection of Fap-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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Fap-1 (H-300) is also recommended for detection of Fap-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Fap-1 siRNA (h): sc-43560, Fap-1 siRNA (m): sc-145067, Fap-1 shRNA Plasmid (h): sc-43560-SH, Fap-1 shRNA Plasmid (m): sc-145067-SH, Fap-1 shRNA (h) Lentiviral Particles: sc-43560-V and Fap-1 shRNA (m) Lentiviral Particles: sc-145067-V.

Molecular Weight of Fap-1: 250 kDa.

Positive Controls: SW480 cell lysate: sc-2219.

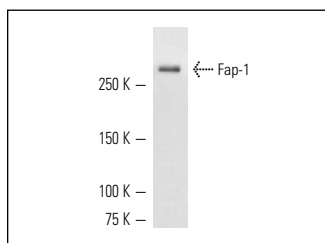
STORAGE

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

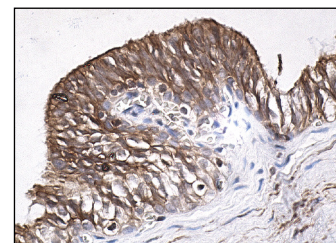
RESEARCH USE

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

DATA



Fap-1 (H-300): sc-15356. Western blot analysis of Fap-1 expression in SW480 whole cell lysate.



Fap-1 (H-300): sc-15356. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts.

SELECT PRODUCT CITATIONS

- Bompard, G., et al. 2002. Protein-tyrosine phosphatase PTPL1/FAP-1 triggers apoptosis in human breast cancer cells. *J. Biol. Chem.* 277: 47861-47869.
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- Spanos, W.C., et al. 2008. The PDZ binding motif of human papillomavirus type 16 E6 induces PTPN13 loss, which allows anchorage-independent growth and synergizes with ras for invasive growth. *J. Virol.* 82: 2493-2500.
- Ghiran, I., et al. 2008. Ligation of erythrocyte CR1 induces its clustering in complex with scaffolding protein FAP-1. *Blood* 112: 3465-3473.
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- Hoover, A.C., et al. 2009. Impaired PTPN13 phosphatase activity in spontaneous or HPV-induced squamous cell carcinomas potentiates oncogene signaling through the MAP kinase pathway. *Oncogene* 28: 3960-3970.
- Glondou-Lassis, M., et al. 2010. PTPL1/PTPN13 regulates breast cancer cell aggressiveness through direct inactivation of Src kinase. *Cancer Res.* 70: 5116-5126.
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- Borinstein, S.C., et al. 2011. Investigation of the insulin-like growth factor-1 signaling pathway in localized Ewing sarcoma: a report from the Children's Oncology Group. *Cancer* 117: 4966-4976.
- Nicolini, V., et al. 2011. Interplay between Ret and Fap-1 regulates CD95-mediated apoptosis in medullary thyroid cancer cells. *Biochem. Pharmacol.* 82: 778-788.