

DAP10 (C-1): sc-374038

BACKGROUND

DAP10, a transmembrane type 1 protein, is predominantly expressed in hematopoietic cells. On SDS-PAGE, DAP10 migrates slightly slower than expected due to glycosylation. DAP10 forms an activating receptor complex with its physiological partner, NKG2D. NKG2D is an activating receptor that initiates Natural Killer and T cell mediated cytotoxicity against tumors expressing its ligands MICA and MICB. The DAP10-NKG2D complex, as well as MICA and MICB, are stress-inducible molecules expressed in epithelial tumors. Both DAP10 and NKG2D contain inhibition motifs in their cytoplasmic domains that recruit tyrosine-phosphatases, resulting in the inactivation of Natural Killer cells. The cytoplasmic region of DAP10 also contains a binding site for the SH2 domain of the p85 subunit of PI 3-kinase which suggests a role for DAP10 as a signal transducer leading to PI 3-kinase activation.

REFERENCES

1. Songyang, Z., Shoelson, S., Chaudhuri, M., Gish, G., Pawson, T., Haser, W., King, F., Roberst, T., Ratnofsky, S. and Lechleider, R. 1993. SH2 domains recognize specific phosphopeptide sequences. *Cell* 72: 767-778.
2. Groh, V., Bahram, S., Bauer, S., Herman, A., Beauchamp, M. and Spies, T. 1996. Cell stress-regulated human major histocompatibility complex class I gene expressed in gastrointestinal epithelium. *Proc. Natl. Acad. Sci. USA* 93: 12445-12450.
3. Lanier, L., Corliss, B., Wu, J. and Phillips, J. 1998. Association of DAP12 with activating CD94/NKG2C NK cell receptors. *Immunity* 8: 693-701.
4. Bauer, S., Groh, V., Wu, J., Steinle, A., Phillips, J., Lanier, L. and Spies, J. 1999. Activation of NK Cells and T cells by NKG2D, a receptor for stress-inducible MICA. *Science* 285: 727-729.
5. Wu, J., Song, Y., Bakker, A., Bauer, S., Spies, T., Lanier, L. and Phillips, J. 1999. An activating immunoreceptor complex formed by NKG2D and DAP10. *Science* 285: 730-732.

CHROMOSOMAL LOCATION

Genetic locus: HCST (human) mapping to 19q13.12.

SOURCE

DAP10 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-42 near the N-terminus of DAP10 of human 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.

Blocking peptide available for competition studies, sc-374038 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

DAP10 (C-1) is recommended for detection of DAP10 of 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).

Suitable for use as control antibody for DAP10 siRNA (h): sc-35171, DAP10 shRNA Plasmid (h): sc-35171-SH and DAP10 shRNA (h) Lentiviral Particles: sc-35171-V.

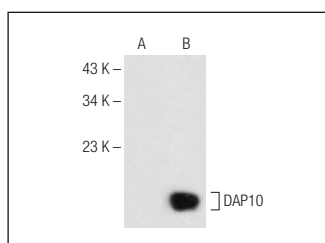
Molecular Weight of DAP10: 10 kDa.

Positive Controls: human DAP10 (transcript variant 2) transfected HEK293T whole cell lysate.

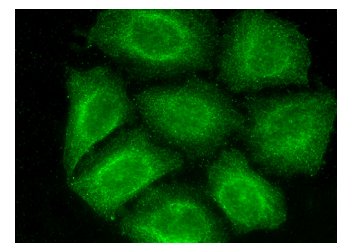
RECOMMENDED SUPPORT REAGENTS

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



DAP10 (C-1): sc-374038. Western blot analysis of DAP10 expression in non-transfected (A) and human DAP10 (transcript variant 2) transfected (B) HEK293T whole cell lysates.



DAP10 (C-1): sc-374038. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

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.