SANTA CRUZ BIOTECHNOLOGY, INC.

DAP10 (h): 293T Lysate: sc-116977

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, NKG2-D. NKG2-D is an activating receptor that initiates Natural Killer and T-cell mediated cytotoxicity against tumors expressing its ligands MICA and MICB. The DAP10-NKG2-D complex, as well as MICA and MICB, are stress-inducible molecules expressed in epithelial tumors. Both DAP10 and NKG2-D 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.

PRODUCT

DAP10 (h): 293T Lysate represents a lysate of human DAP10 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

DAP10 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive DAP10 antibodies. Recommended use: 10-20 µl per lane.

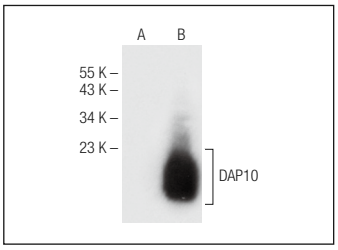
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

DAP10 (H-3): sc-374196 is recommended as a positive control antibody for Western Blot analysis of enhanced human DAP10 expression in DAP10 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

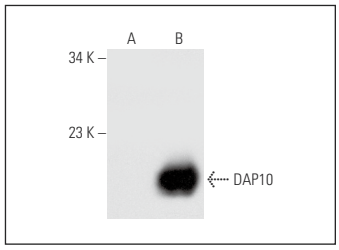
RECOMMENDED SUPPORT REAGENTS

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.

DATA



DAP10 (H-3): sc-374196. Western blot analysis of DAP10 expression in non-transfected: sc-117752 (**A**) and human DAP10 transfected: sc-116977 (**B**) 293T whole cell lysates.



DAP10 (H-2): sc-133173. Western blot analysis of DAP10 expression in non-transfected: sc-117752 (**A**) and human DAP10 transfected: sc-116977 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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