

# DAP10 (N-17): sc-10529

## 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., et al. 1993. SH2 domains recognize specific phosphopeptide sequences. *Cell* 72: 767-778.
2. Groh, V., et al. 1996. Cell stress-regulated human major histocompatibility complex class I gene expressed in gastrointestinal epithelium. *Proc. Natl. Acad. Sci. USA* 93: 12445-12450.

## CHROMOSOMAL LOCATION

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

## SOURCE

DAP10 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DAP10 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.

Blocking peptide available for competition studies, sc-10529 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

DAP10 (N-17) 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).

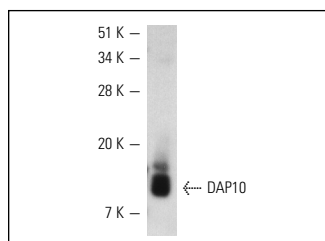
Suitable for use as control antibody for DAP10 siRNA (h): sc-35171, DAP10 shRNA Plasmid (h): sc-35171-SH and DAP10 shRNA (h) Lentiviral Particles: sc-35171-V.

Molecular Weight of DAP10: 10 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



DAP10 (N-17): sc-10529. Western blot analysis of human recombinant DAP10.

## SELECT PRODUCT CITATIONS

1. Rosen, D.B., et al. 2004. A structural basis for the association of DAP12 with mouse, but not human, NKG2-D. *J. Immunol.* 173: 2470-2478.
2. Verneris, M.R., et al. 2004. Role of NKG2-D signaling in the cytotoxicity of activated and expanded CD8<sup>+</sup> T cells. *Blood* 103: 3065-3072.
3. Groh, V., et al. 2006. FAS-ligand-mediated paracrine T cell regulation by the receptor NKG2-D in tumor immunity. *Nat. Immunol.* 7: 755-762.
4. Marusina, A.I., et al. 2008. Regulation of human DAP10 gene expression in NK and T cells by Ap-1 transcription factors. *J. Immunol.* 180: 409-417.
5. Benitez, A.C., et al. 2011. Expression, signaling proficiency, and stimulatory function of the NKG2D lymphocyte receptor in human cancer cells. *Proc. Natl. Acad. Sci. USA* 108: 4081-4086.
6. Park, Y.P., et al. 2011. Complex regulation of human NKG2D-DAP10 cell surface expression: opposing roles of the γc cytokines and TGF-β1. *Blood* 118: 3019-3027.

## STORAGE

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


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Try **DAP10 (H-2): sc-133173** or **DAP10 (C-5): sc-374037**, our highly recommended monoclonal alternatives to DAP10 (N-17).