

# DAP10 (M-19): sc-10533

## BACKGROUND

DAP10, a transmembrane type 1 protein, is predominantly expressed in hematopoietic cells. On SDS-PAGE, DAP10 migrates slightly slower than the 10 kDa predicted molecular weight 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 SH<sub>2</sub> 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. SH<sub>2</sub> 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 19q13.1; Hcst (mouse) mapping to 7 B1.

## SOURCE

DAP10 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DAP10 of mouse 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-10533 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DAP10 (M-19) is recommended for detection of DAP10 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) 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 siRNA (m): sc-42853, DAP10 shRNA Plasmid (h): sc-35171-SH, DAP10 shRNA Plasmid (m): sc-42853-SH, DAP10 shRNA (h) Lentiviral Particles: sc-35171-V and DAP10 shRNA (m) Lentiviral Particles: sc-42853-V.

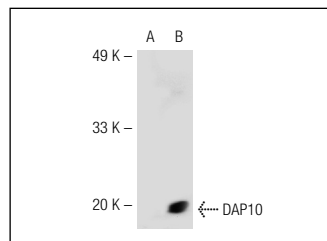
Molecular Weight of DAP10/NKG2-D complex: 42 kDa.

Positive Controls: DAP10 (h): 293T Lysate: sc-116977.

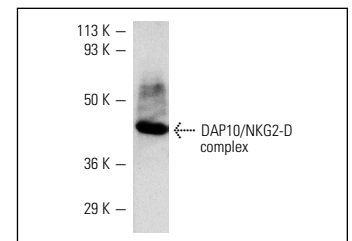
## RECOMMENDED SECONDARY REAGENTS

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 (M-19): sc-10533. Western blot analysis of DAP10 expression in non-transfected: sc-117752 (A) and human DAP10 transfected: sc-116977 (B) 293T whole cell lysates.



DAP10 (M-19): sc-10533. Western blot analysis of DAP10/NKG2-D complex expression in CTLL-2 whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Nitahara, A., et al. 2006. NKG2-D ligation without T cell receptor engagement triggers both cytotoxicity and cytokine production in dendritic epidermal T cells. *J. Invest. Dermatol.* 126: 1052-1058.
2. Horng, T., et al. 2007. NKG2-D signaling is coupled to the interleukin 15 receptor signaling pathway. *Nat. Immunol.* 8: 1345-1352.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **DAP10 (H-2): sc-133173** or **DAP10 (H-3): sc-374196**, our highly recommended monoclonal alternatives to DAP10 (M-19).