

**Goat Anti-DAP10 / HCST Antibody**  
Peptide-affinity purified goat antibody  
Catalog # AF1299a

## Specification

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### Goat Anti-DAP10 / HCST Antibody - Product Information

Application	WB
Primary Accession	<a href="#">Q9UBK5</a>
Other Accession	<a href="#">NP_001007470</a> , <a href="#">10870</a> , <a href="#">23900 (mouse)</a> , <a href="#">474146 (rat)</a>
Reactivity	Human
Predicted	Mouse, Rat
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	9489

### Goat Anti-DAP10 / HCST Antibody - Additional Information

**Gene ID** 10870

#### Other Names

Hematopoietic cell signal transducer, DNAX-activation protein 10, Membrane protein DAP10, Transmembrane adapter protein KAP10, HCST, DAP10, KAP10, PIK3AP

#### Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Goat Anti-DAP10 / HCST Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Goat Anti-DAP10 / HCST Antibody - Protein Information

**Name** HCST

**Synonyms** DAP10, KAP10, PIK3AP

#### Function

Transmembrane adapter protein which associates with KLRK1 to form an activation receptor KLRK1-HCST in lymphoid and myeloid cells; this receptor plays a major role in triggering

cytotoxicity against target cells expressing cell surface ligands such as MHC class I chain-related MICA and MICB, and UL16-binding proteins (ULBPs); these ligands are up-regulated by stress conditions and pathological state such as viral infection and tumor transformation. Functions as a docking site for PI3-kinase PIK3R1 and GRB2. Interaction of ULBPs with KLRK1-HCST triggers calcium mobilization and activation of the PIK3R1, MAP2K/ERK, and JAK2/STAT5 signaling pathways. Both PIK3R1 and GRB2 are required for full KLRK1-HCST-mediated activation and ultimate killing of target cells. In NK cells, KLRK1-HCST signaling directly induces cytotoxicity and enhances cytokine production initiated via DAP12/TYROBP-associated receptors. In T-cells, it provides primarily costimulation for TCR-induced signals. KLRK1-HCST receptor plays a role in immune surveillance against tumors and is required for cytolysis of tumor cells; indeed, melanoma cells that do not express KLRK1 ligands escape from immune surveillance mediated by NK cells.

#### Cellular Location

Membrane; Single-pass type I membrane protein

#### Tissue Location

Predominantly expressed in hemopoietic cells such as NK cells, subset of T-cells and monocytes. Detected in leukocytes, spleen, and thymus.

### Goat Anti-DAP10 / HCST Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Goat Anti-DAP10 / HCST Antibody - Images



AF1299a (0.2  $\mu\text{g/ml}$ ) staining of human spleen lysate (35  $\mu\text{g}$  protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### Goat Anti-DAP10 / HCST Antibody - Background

This gene encodes a transmembrane signaling adaptor that contains a YxxM motif in its

cytoplasmic domain. The encoded protein may form part of the immune recognition receptor complex with the C-type lectin-like receptor NKG2D. As part of this receptor complex, this protein may activate phosphatidylinositol 3-kinase dependent signaling pathways through its intracytoplasmic YxxM motif. This receptor complex may have a role in cell survival and proliferation by activation of NK and T cell responses. Alternative splicing results in two transcript variants encoding different isoforms.

### **Goat Anti-DAP10 / HCST Antibody - References**

The traffic of the NKG2D/Dap10 receptor complex during natural killer (NK) cell activation. Roda-Navarro P, et al. J Biol Chem, 2009 Jun 12. PMID 19329438.

A critical role for DAP10 and DAP12 in CD8+ T cell-mediated tissue damage in large granular lymphocyte leukemia. Chen X, et al. Blood, 2009 Apr 2. PMID 19075187.

Silencing human NKG2D, DAP10, and DAP12 reduces cytotoxicity of activated CD8+ T cells and NK cells. Karimi M, et al. J Immunol, 2005 Dec 15. PMID 16339517.

Comparative analysis of human NK cell activation induced by NKG2D and natural cytotoxicity receptors. Andr  P, et al. Eur J Immunol, 2004 Apr. PMID 15048706.

The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. Clark HF, et al. Genome Res, 2003 Oct. PMID 12975309.