

## Recombinant Mouse Hcst Protein, Myc/DDK-tagged

Cat. No. Hcst-3365M Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Purified recombinant protein of mouse full-length hematopoietic cell signal transducer (cDNA clone MGC:73601 IMAGE:640698), complete cds, with C-terminal MYC/DDK tag, expressed in HEK293T cells.

**Species** Mouse

**Source** HEK293

**Description** 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 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 tumors cells; indeed, melanoma cells that do not express KLRK1 ligands escape from immune surveillance mediated by NK cells.

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<b>Molecular Mass</b>	7.4 kDa
<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Stability</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>Storage</b>	Store at -80 centigrade after receiving vials.
<b>Concentration</b>	>50 µg/mL as determined by microplate BCA method
<b>Storage Buffer</b>	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

## GENE INFORMATION

<b>Gene Name</b>	Hcst hematopoietic cell signal transducer [ <i>Mus musculus</i> (house mouse) ]
<b>Official Symbol</b>	Hcst
<b>Synonyms</b>	Hcst; hematopoietic cell signal transducer; DAP; KAP; DAP10; KAP10; hematopoietic cell signal transducer; DNAX-activation protein 10; membrane protein DAP10; transmembrane adapter protein KAP10
<b>Gene ID</b>	23900
<b>mRNA Refseq</b>	NM_011827
<b>Protein Refseq</b>	NP_035957
<b>UniProt ID</b>	Q9QUJ0

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