

## SLAMF6 Protein, Human (HEK293)

Cat. No.:	HY-P76645
Synonyms:	SLAM Family Member 6; Activating NK Receptor; NK-T-B-Antigen; NTB-A; CD352; KAL1f
Species:	Human
Source:	HEK293
Accession:	Q96DU3 (M1-M226)
Gene ID:	114836
Molecular Weight:	37-43 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

SLAMF6, a self-ligand receptor within the signaling lymphocytic activation molecule (SLAM) family, plays a crucial role in modulating the activation and differentiation of diverse immune cells, contributing to the intricate regulation and coordination of both innate and adaptive immune responses. The activities of SLAMF6 are finely controlled by the presence or absence of small cytoplasmic adapter proteins, such as SH2D1A/SAP and/or SH2D1B/EAT-2. Notably, SLAMF6 triggers cytolytic activity specifically in natural killer (NK) cells expressing high surface densities of natural cytotoxicity receptors and engages positive signaling in NK cells, involving the phosphorylation of VAV1 and dependence on SH2D1B rather than SH2D1A. In conjunction with SLAMF1, SLAMF6 governs the transition and differentiation of the thymocytic natural killer T (NKT) cell lineage. Additionally, SLAMF6 promotes T-cell differentiation into a Th17 phenotype, leading to increased IL-17 secretion, and acts in concert with SLAMF1 and CD84/SLAMF5 as a potential negative regulator of the humoral immune response. Furthermore, in the absence of SH2D1A/SAP, SLAMF6 can transmit negative signals to CD4(+) T-cells and NKT cells, negatively regulating germinal center formation and potentially contributing to B-cell tolerance in germinal centers while preventing autoimmunity. SLAMF6 exists as a homodimer and interacts with PTN6 and PTN11, as well as with SH2D1A/SAP and SH2D1B/EAT2, with both adapter proteins able to associate with the same SLAMF6 molecule, mediated by ITSM 2.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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