

CD84/SLAMF5 Protein, Rhesus Macaque (HEK293, His)

Cat. No.:	HY-P77326
Synonyms:	SLAM family member 5; CD84; Ly-9B; SLAMF5
Species:	Rhesus Macaque
Source:	HEK293
Accession:	F6QA53 (K22-R220)
Gene ID:	/
Molecular Weight:	Approximately 35-50 kDa due to the glycosylation.

PROPERTIES

AA Sequence	<p> KDSEIITVNG I LGESVTFPV NIQEPQQVTN IAWTSKTSVA YVTPGDSEMA PIVAVTHRNY YERIHALGPK YDLVISDLRM EDAGDYKADI NTQAEPYTTT KRYNLQVYRR LGKPKITQSL MASVNSTCNV TLTCSVEKEE KNVTYNWSPL GEEGNVLQIF QTPEEQELTY TCTAQNPVSN NSDSISARQL CADIAMGLR </p>
Biological Activity	Measured in a cell proliferation assay using PHA stimulated Jurkat cells in the presence of anti-CD3. The ED ₅₀ for this effect is 1.389 µg/mL in the presence of anti-CD3 immobilized at 2µg/mL, corresponding to a specific activity is 719.942 units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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 ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	<p>The CD84/SLAMF5 protein serves as a self-ligand receptor within the signaling lymphocytic activation molecule (SLAM) family, engaging in homo- or heterotypic cell-cell interactions that modulate the activation and differentiation of diverse immune cells, contributing to the intricate regulation and interconnection of both innate and adaptive immune responses. The protein's activities are finely tuned by the presence or absence of small cytoplasmic adapter proteins, including</p>
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SH2D1A/SAP and/or SH2D1B/EAT-2. CD84/SLAMF5 can mediate natural killer (NK) cell cytotoxicity, dependent on both SH2D1A and SH2D1B. It enhances proliferative responses of activated T-cells, and SH2D1A/SAP appears not to be required for this process. Homophilic interactions amplify interferon gamma/IFNG secretion in lymphocytes and induce platelet stimulation via a SH2D1A-dependent pathway. The protein may serve as a marker for hematopoietic progenitor cells. Essential for prolonged T-cell:B-cell contact, optimal T follicular helper function, and germinal center formation, CD84/SLAMF5 in germinal centers contributes to maintaining B-cell tolerance and preventing autoimmunity. In mast cells, it negatively regulates high-affinity immunoglobulin epsilon receptor signaling, independently of SH2D1A and SH2D1B but implicating FES and PTPN6/SHP-1. In macrophages, it positively regulates LPS-induced MAPK phosphorylation and NF-kappaB activation, modulating LPS-induced cytokine secretion. Additionally, CD84/SLAMF5 positively regulates macroautophagy in primary dendritic cells through the stabilization of IRF8 and inhibits TRIM21-mediated proteasomal degradation of IRF8. The protein forms homodimers via its extracellular domain and interacts with CD48 molecules from other cells in a head-to-tail dimeric arrangement. It also interacts with SH2 domain-containing proteins, including SH2D1A/SAP and SH2D1B/EAT-2, and tyrosine-protein phosphatases PTPN6/SHP-1 and PTPN11/SHP-2 via its phosphorylated cytoplasmic domain, with the latter interaction blocked by SH2D1A. CD84/SLAMF5 further interacts with INPP5D/SHIP1 through its phosphorylated ITSM domains.

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

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