

## Recombinant Human SLAMF4 (CD244/2B4)-Fc Chimera (carrier-free)

<b>Catalog# / Size</b>	784202 / 10 µg 784204 / 25 µg 784206 / 100 µg 784208 / 500 µg
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	SLAMF4, SLAM family member 4, 2B4, Natural killer cell receptor 2B4, NK cell activation-inducing ligand, NAIL, NK cell type I receptor protein 2B4, NKR2B4, h2B4, signaling lymphocytic activation molecule 4, CD244
<b>Description</b>	<p>SLAMF4, also known as 2B4 and CD244, is one of the members of the CD2 subfamily. It is expressed on NK cells, monocytes, basophils, TCR γ/δ T cells, and a subset of CD8+ T cells. Engagement of SLAMF4 by antibodies or a natural ligand, such as CD48, leads to tyrosine phosphorylation of SLAMF4, cell-mediated cytotoxicity and IFN-γ secretion by NK cells. Except CD48 ligation, SLAMF4-mediated non-MHC-restricted cell cytotoxicity is also dependent on others NCRs, such as Nkp46 (NCR1/CD335). However, engagement of SLAMF4 with inhibitory receptors, such as KIR2DL1 or NKG2 (CD94), blocks SLAMF4-mediated cell cytotoxicity and cytokine production. The cytoplasmic region of SLAMF4 contains several immunoreceptor tyrosine-based switch motifs (ITSMs), which serve as activating and inhibitory regulatory elements for SLAMF4-mediated signaling. Its ITSMs can not only bind to SAP and Src kinase Fyn but also recruit the inhibitory kinase, Csk, and phosphatase SHP-1, SHP-2, and SHIP, leading to positive and negative signaling on cells. The activating and inhibitory functions are dependent on the density of surface expression of SLAMF4, degree of ligation, and the level of the adaptor molecule SAP expression. In XLP (X-linked lymphoproliferative disease) patients, SLAMF4 engagement cannot activate NK cells due to impairment of SAP/SH2D1A association. It has shown that SLAMF4 interacts with CD48 and functions as a costimulatory molecule, playing a critical role in cell proliferation and MHC-restricted cytotoxicity in CD8+ T cells. SLAMF4 expression also correlates with T cell differentiation. CD8+ effector αβ T cells predominantly express surface SLAMF4 with high levels of granzyme B and perforin expression, and rapid production of IFN-γ.</p>

### Product Details

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<b>Source</b>	Human SLAMF4, amino acid (Cys22-Arg221) (Accession: # NP_057466.1), with a linker (GSSR) and a C-terminal human IgG (Pro100-Lys330), was expressed in 293E cells.
<b>Molecular Mass</b>	The 435 amino acid recombinant protein has a predicted molecular mass of approximately 48.58 kD. The DTT-reduced and non-reduced protein migrates at between 66 kD and 120 kD respectively by SDS-PAGE. The predicted N-terminal amino acid is Cys.
<b>Purity</b>	>95%, as determined by Coomassie stained SDS-PAGE.
<b>Formulation</b>	0.22 µm filtered protein solution is in PBS pH7.2.
<b>Endotoxin Level</b>	Less than 0.1 EU per µg protein as determined by the LAL method.
<b>Concentration</b>	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. <b>Avoid repeated freeze/thaw cycles.</b>
<b>Activity</b>	The ED <sub>50</sub> is 0.5 - 2.5 µg/mL, as measured by the ability of immobilized protein to induce IFN-γ production by NK-92 cells. Human IFN-γ ELISA MAX™ Deluxe Kit (Cat. No. 430104) was used to measure IFN-γ production.
<b>Application</b>	<a href="#">Bioassay</a>
<b>Application Notes</b>	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue ice. Our

comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our [100% satisfaction guarantee](#). If you have any concerns, contact us at [tech@biolegend.com](mailto:tech@biolegend.com).

## Antigen Details

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<b>Structure</b>	CD2 subfamily
<b>Distribution</b>	NK cells, monocytes and basophils, TCR $\gamma/\delta$ T cells, and a subset of CD8+ T cells.
<b>Function</b>	Engagement of SLAMF4 with CD48 stimulates cell-mediated cytotoxicity and cytokine secretion.
<b>Interaction</b>	Fyn, SAP/SH2D1A, Csk, SHP-1, SHP-2, SHIP
<b>Ligand/Receptor</b>	SLAMF2/CD48
<b>Bioactivity</b>	Recombinant human SLAMF4 induces the production of IFN- $\gamma$ in human NK-92 cells.
<b>Cell Type</b>	Basophils, Monocytes, NK cells, T cells
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	CD Molecules, Soluble Receptors

### Antigen References

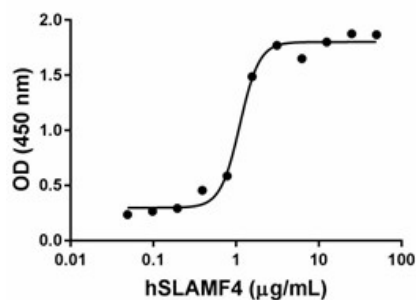
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### Gene ID

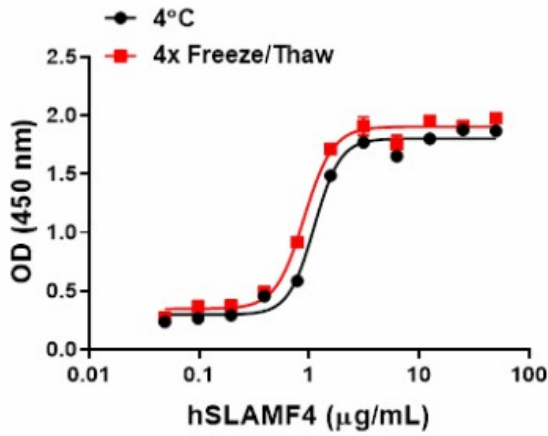
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## Product Data

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Recombinant human SLAMF4/CD244 induces the production of IFN- $\gamma$  in human NK-92 cells in a dose dependent manner. The ED50 for this effect is 0.5 – 2.5  $\mu\text{g/mL}$ .



**Stability Testing for Recombinant Human SLAMF4.** Recombinant Human SLAMF4 was aliquoted in PBS, pH7 at 0.2 mg/mL. One aliquot was frozen and thawed four times (4x Freeze/Thaw) and compared to the control that was kept at 4°C (Control). The samples were tested for their ability to induce the production of IFN $\gamma$  in human NK-92 cells in a dose dependent manner. The ED<sub>50</sub> for this effect is 0.5 – 2.5 µg/mL.

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