# Recombinant Human Leukocyte-associated Immunoglobulin-like Receptor 1/LAIR1/CD305 (C-mFc)

**Catalog Number: PKSH033925**

**Note:** *Centrifuge before opening to ensure complete recovery of vial contents.*

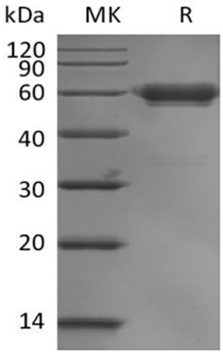
## Description

| | |
|---|---|
| **Species** | Human |
| **Source** | HEK293 Cells-derived Human LAIR1;CD305 protein Gln22-His163, with an C-terminal mFc |
| **Calculated MW** | 41.8 kDa |
| **Observed MW** | 50-60 kDa |
| **Accession** | Q6GTX8 |
| **Bio-activity** | Not validated for activity |

## Properties

| | |
|---|---|
| **Purity** | > 95 % as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU per μg of the protein as determined by the LAL method. |
| **Storage** | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months. |
| **Shipping** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of 20mM PB, 150mM NaCl, pH 7.2. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| **Reconstitution** | Please refer to the printed manual for detailed information. |

## Data




> 95 % as determined by reducing SDS-PAGE.

## Background

Leukocyte-Associated Immunoglobulin-Like Receptor 1 (LAIR1) is a single-pass type I membrane protein. LAIR1 expressed on the majority of peripheral mononuclear cells, including natural killer (NK) cells, T-cells, B-cells, monocytes, and dendritic cells, highly in naive T-cells and B-cells. As an inhibitory receptor, LAIR1 plays a constitutive negative regulatory role on cytolytic function of natural killer (NK) cells, B-cells and T-cells. Activation by Tyr phosphorylation results in recruitment and activation of the phosphatases PTPN6 and PTPN11. It also reduces the increase of intracellular calcium evoked by B-cell receptor ligation. LAIR1 plays inhibitory role independently of SH2-containing phosphatases and modulates cytokine production in CD4+ T-cells. It down-regulates IL2 and IFNG production while inducing secretion of transforming growth factor beta, also down-regulates IgG and IgE production in B-cells as well as IL8, IL10 and TNF secretion. LAIR1 inhibits the differentiation of peripheral blood precursors towards dendritic cells. It also restrains proliferation and induces apoptosis in myeloid leukemia cell lines as well as prevents nuclear translocation of NF-kappa-B p65 subunit/RELA and phosphorylation of I-kappa-B alpha/CHUK in these cells.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