

**Synonym**

LAIR1,CD305

**Source**

Mouse LAIR1 Protein, His Tag(LA1-M52H3) is expressed from human 293 cells (HEK293). It contains AA Gln 22 - Tyr 141 (Accession # [Q8BG84-1](#)).

Predicted N-terminus: Gln 22

**Molecular Characterization**

LAIR-1(Gln 22 - Tyr 141)  
**Q8BG84-1**      Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 15.4 kDa. The protein migrates as 17-35 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.

**Purity**

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

**Formulation**

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

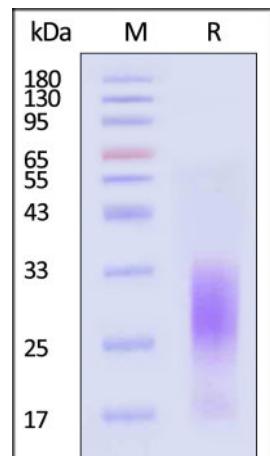
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

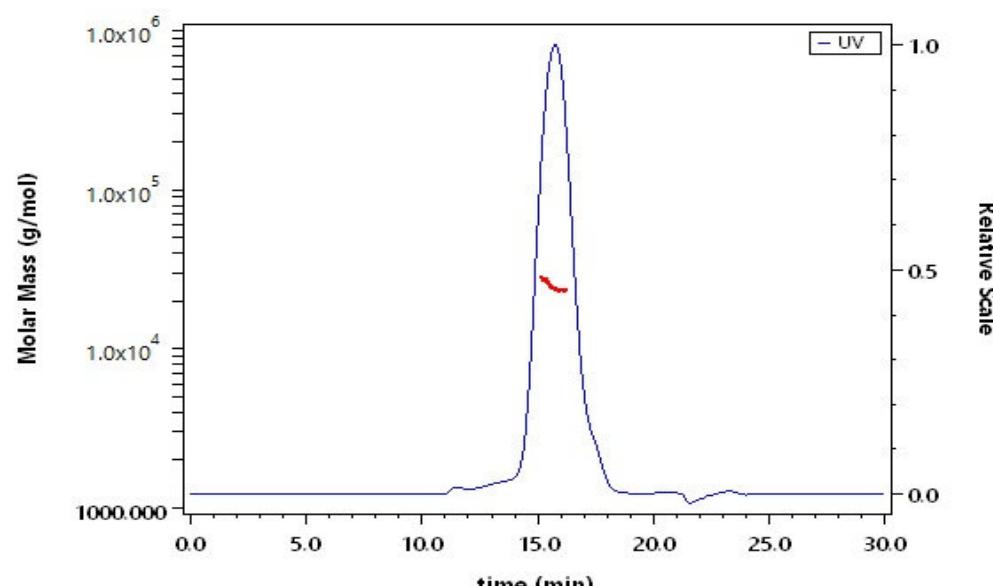
*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

Mouse LAIR1 Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

**SEC-MALS**

The purity of Mouse LAIR1 Protein, His Tag (Cat. No. LA1-M52H3) is more than 90% and the molecular weight of this protein is around 20-28 kDa verified by SEC-MALS.

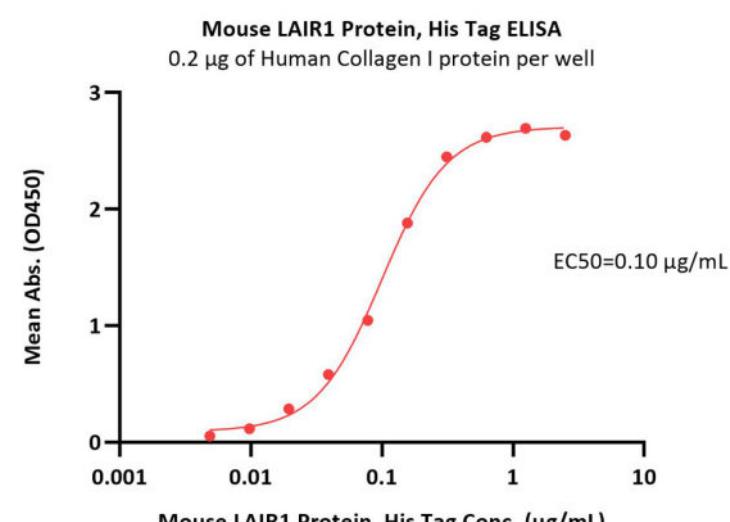
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Immobilized Human Collagen I protein at 2 µg/mL (100 µL/well) can bind  
Mouse LAIR1 Protein, His Tag (Cat. No. LA1-M52H3) with a linear range of  
0.01-0.156 µg/mL (QC tested).

## Background

Leukocyte-associated immunoglobulin-like receptor-1 (LAIR-1) is constitutively expressed on the majority of human peripheral blood mononuclear leukocytes. LAIR-1 or CD305 is a transmembrane glycoprotein with a single immunoglobulin-like domain and a cytoplasmic tail containing two immune receptor tyrosine-based inhibitory motifs. LAIR-1 recruits SHP-1 and SHP-2 phosphatases upon activation, and cross-linking of the LAIR-1 antigen on natural killer (NK) cells results in strong inhibition of NK cell-mediated cytotoxicity. Functions as an inhibitory receptor that 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. Diseases associated with LAIR1 include Chronic Active Epstein-Barr Virus Infection and Palindromic Rheumatism.

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