



### Synonym

LAIR1,CD305

### Source

Human LAIR-1, Fc Tag(LA1-H5252) is expressed from human 293 cells (HEK293). It contains AA Gln 22 - His 163 (Accession # [Q6GTX8-1](#)).

Predicted N-terminus: Gln 22

### Molecular Characterization

LAIR-1(Gln 22 - His 163) Q6GTX8-1	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 42.1 kDa. The protein migrates as 55 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 1.0 EU per µg by the LAL method.

### Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

### Formulation

Lyophilized from 0.22 µm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5 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

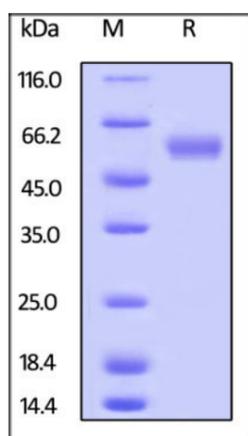
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

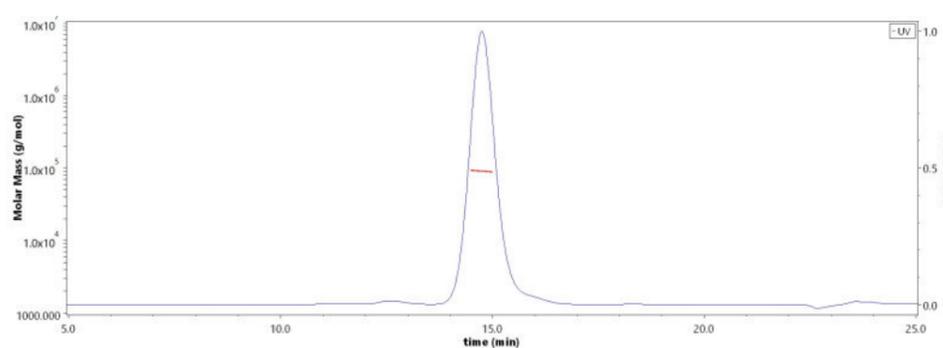
### SDS-PAGE



Human LAIR-1, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

### Bioactivity-ELISA

### SEC-MALS

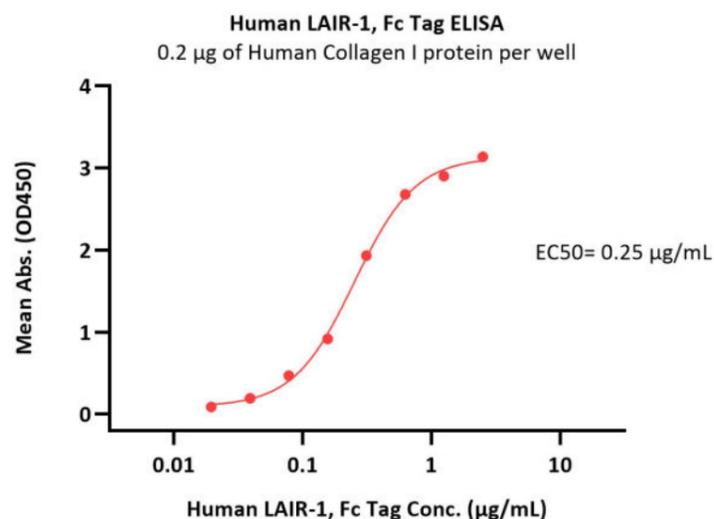


The purity of Human LAIR-1, Fc Tag (Cat. No. LA1-H5252) is more than 90% and the molecular weight of this protein is around 85-105 kDa verified by SEC-MALS.

[Report](#)

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Immobilized Human Collagen I protein at 2 µg/mL (100 µL/well) can bind Human LAIR-1, Fc Tag (Cat. No. LA1-H5252) with a linear range of 0.02-0.3 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.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.

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