

LAIR1 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	5133400011Rik;BB115266;D7Bwg0421e;leukocyte-associated immunoglobulin-like receptor 1;Lair-1
Protein Construction:	Gln22-Tyr141
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q8BG84-1
Molecular Weight:	14.6 kDa (Predicted); 30-42 kDa (Due to glycosylation)

QC Testing

Biological Activity:	Activity testing is not tested. It is theoretically active, but we cannot guarantee it.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

LAIR1 (leukocyte-associated Ig-like receptor-1, designated CD305) is an approximately 40 kDa type I transmembrane inhibitory glycoprotein belonging to the Ig superfamily. LAIR1 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.

Reference

Meyaard L, et al. (1999) Leukocyte-associated Ig-like receptor-1 functions as an inhibitory receptor on cytotoxic T cells. *J Immunol.* 162 (10): 5800-4.

Meyaard L, et al. (2001) The epithelial cellular adhesion molecule (Ep-CAM) is a ligand for the leukocyte-associated immunoglobulin-like receptor (LAIR). *J Exp Med.* 194 (1): 107-12.

Xu M, et al. (2000) Identification and characterization of leukocyte-associated Ig-like receptor-1 as a major anchor protein of tyrosine phosphatase SHP-1 in hematopoietic cells. *J Biol Chem.* 275 (23): 17440-6.

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