

Recombinant Rat LAIR1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52690

Size: 10ug, 100ug

Protein Name: Leukocyte-associated immunoglobulin-like receptor 1 (LAIR-1) (rLAIR1) (CD antigen CD305)

Synonym: Lair1

UniProt ID: P0C1X9

UniProt Link: www.uniprot.org/uniprotkb/P0C1X9/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 263 AA

Molecular Weight: 30 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPLHSVIVLVVLCLGWKSNTQEESLSDFTICAEPGPVIPQGNFITIVCSTSGEYDTRLEKEGSTFME
KKTEPHGKQHRFRIGPVNETITGYNCIFEKNYVWSQRSNDLQLKVIKENVTQGLAPGPSMTSDTSW
LKTYSIHILTVVSVIFLLCLSLFLFCFLSHRQKKQGLPNNKSQHQRSQERLNLATNGLEKTSDIVMDDS
LSEDRQTETWTPVAGDLQEVTYAQLDHDSLQRTVKDVTPQNRVIMAESSTYAAIMRC

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Leukocyte-associated immunoglobulin-like receptor 1 (LAIR-1) (rLAIR1) (CD antigen CD305) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: 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. May also play its inhibitory role independently of SH2-containing phosphatases. Modulates cytokine production in CD4+ T-cells, down-regulating 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. Inhibits 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. Inhibits the differentiation of peripheral blood precursors towards dendritic cells (By similarity).

Subcellular Localization: Membrane ; Single-pass membrane protein .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.