

# PRODUCT INFORMATION



## LAIR-2 (human, recombinant)

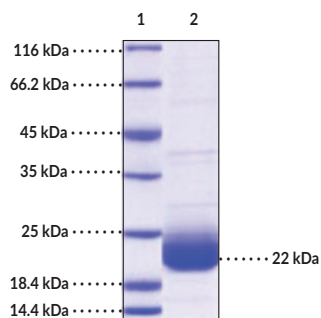
Item No. 32019

### Overview and Properties

**Synonyms:** CD306, Leukocyte-associated Immunoglobulin-like Receptor 2  
**Source:** Active recombinant human LAIR-2 expressed in HEK293 cells  
**Amino Acids:** 22-152  
**Molecular Weight:** 14.1 kDa  
**Storage:** -80°C (as supplied)  
**Stability:** ≥1 year  
**Purity:** ≥93% estimated by SDS-PAGE  
**Supplied in:** Lyophilized from sterile 50 mM Tris with 0.7 M sodium chloride, pH 8.0  
**Endotoxin Testing:** <1.0 EU/μg, determined by the LAL endotoxin assay  
**Bioactivity:** Measured by the ability of the immobilized protein to support the adhesion of HT-29 human colon adenocarcinoma cells. When  $5 \times 10^4$  cells/well are added to LAIR-2 (human, recombinant)-coated plates (50 μg/ml with 100 μl/well), >30% will adhere after 30 minutes at 37°C. Optimal concentration depends on cell type as well as the application or research objectives.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers  
Lane 2: LAIR-2

**SDS-PAGE Analysis of LAIR-2.** This protein has a calculated molecular weight of 14.1 kDa. It has an apparent molecular weight of approximately 22 kDa by SDS-PAGE under reducing conditions due to glycosylation.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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Leukocyte-associated immunoglobulin-like receptor 2 (LAIR-2) is a soluble homolog of the membrane-bound inhibitory immune receptor LAIR-1.<sup>1</sup> LAIR-2, which is comprised of a single immunoglobulin-like domain, binds to collagen and inhibits the LAIR-1/collagen interaction and subsequent activation of immunocytes.<sup>1,2</sup> It is produced by human peripheral blood mononuclear cells (PBMCs), monocytic and T cell lines, and activated CD4<sup>+</sup> T cells.<sup>2,3</sup> LAIR-2 fused to the Fc region of human IgG1 inhibits collagen-induced platelet aggregation, adhesion of platelets to collagen-coated coverslips, and binding of collagen to von Willebrand factor (VWF) and glycoprotein VI (GpVI).<sup>4</sup> Elevated levels of LAIR-2 have been found in the urine of pregnant women, the synovial fluid of patients with rheumatoid arthritis, and sera from patients with autoimmune thyroid diseases.<sup>1,2</sup> Cayman's LAIR-2 (human, recombinant) protein can be used for binding assay applications. This protein consists of 131 amino acids, has a calculated molecular weight of 14.1 kDa, and a predicted N-terminus of Gln22 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 22 kDa due to glycosylation.

## References

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1. Simone, R., Pesce, G., Antola, P., *et al.* Serum LAIR-2 is increased in autoimmune thyroid diseases. *PLoS One* **8(5)**, e63282 (2013).
2. Lebbink, R.J., van den Berg, M.C.W., de Ruiter, T., *et al.* The soluble leukocyte-associated Ig-like receptor (LAIR)-2 antagonizes the collagen/LAIR-1 inhibitory immune interaction. *J. Immunol.* **180(3)**, 1662-1669 (2008).
3. Olde Nordkamp, M.J.M., van Roon, J.A.G., Douwes, M., *et al.* Enhanced secretion of leukocyte-associated immunoglobulin-like receptor 2 (LAIR-2) and soluble LAIR-1 in rheumatoid arthritis: LAIR-2 is a more efficient antagonist of the LAIR-1-collagen inhibitory interaction than is soluble LAIR-1. *Arthritis Rheum.* **63(12)**, 3749-3757 (2011).
4. Lenting, P.J., Westerlaken, G.H.A., Denis, C.V., *et al.* Efficient inhibition of collagen-induced platelet activation and adhesion by LAIR-2, a soluble Ig-like receptor family member. *PLoS One* **5(8)**, e12174 (2010).

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