

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived cynomolgus monkey LAIR2 protein		
	Cynomolgus Monkey LAIR2 (Gln22-Ser152) Accession # XP_005590391.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Gln22 deduced from Glu23 after deblocking.		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	41 kDa		

SPECIFICATIONS

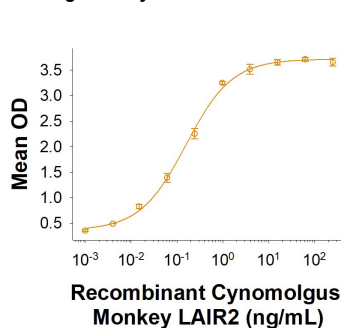
SDS-PAGE	53-60 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Bovine Collagen I is coated at 10 µg/mL (100 µL/well), Recombinant Cynomolgus Monkey LAIR2 Fc Chimera (Catalog # 10340-LR) binds with an ED ₅₀ of 0.04-0.32 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in PBS.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

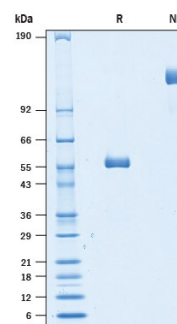
DATA

Binding Activity



When Bovine Collagen I is coated at 10 µg/mL (100 µL/well), Recombinant Cynomolgus Monkey LAIR2 Fc Chimera (Catalog # 10340-LR) binds with an ED₅₀ of 0.04-0.32 ng/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey LAIR2 Fc Chimera (Catalog # 10340-LR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 53-60 kDa and 100-120 kDa, respectively.

BACKGROUND

LAIR2 (leukocyte-associated Ig-like receptor-2; CD306) is a secreted protein that contains one Ig-like C2 type domain, making it a member of the Ig superfamily. Cynomolgus LAIR-2 cDNA encodes a 152 amino acid (aa) polypeptide precursor. Based on the similarity with human LAIR2, it likely includes a 21 aa signal peptide and a 131 aa mature chain. Cynomolgus LAIR2 shares 78% aa identity with human LAIR2. When compared to LAIR1, its transmembrane counterpart, LAIR2 shares 83% aa identity across the signal sequence and extracellular domains (1-3). Although one is secreted and the other is membrane-bound, the two LAIR proteins are thought to have arisen from a common gene ancestor and appear to share similar adhesion profiles. This suggests that LAIR2 may compete with LAIR1 for ligand binding (3, 4). The expression profile of these splice forms, and the presence of orthologs in other species, have not been reported. LAIR2 is a soluble collagen-receptor, and it can be detected in the synovial fluid of rheumatoid arthritis patients, urine of pregnant women, and as well as primary cells (5, 6). *In vitro* studies have demonstrated LAIR2 can compete with LAIR1 for the same collagen binding site and suggesting LAIR2 may play an important role in immune cell activation (5, 6). LAIR2 can interact with complement component 1q (C1q) and mannose-binding lectin (MBL) and act as a complement inhibitor for the treatment and prevention of antibody-mediated allograft rejection and antibody-mediated clinical conditions (7).

References:

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3. Meyaard, L. *et al.* (1997) *Immunity* **7**:283.
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6. Olde Nordkamp, M.J. *et al.* (2011) *Arthritis Rheum.* **63**:3749.
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