

## DESCRIPTION

<b>Source</b>	Human embryonic kidney cell, HEK293-derived cynomolgus monkey LAIR1 protein		
	Cynomolgus Monkey LAIR1 (Gln22-His163) Accession # XP_015297320.1	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Gln22, deduced from deblocked sequence at Glu23		
<b>Structure / Form</b>	Disulfide-linked homodimer		
<b>Predicted Molecular Mass</b>	42 kDa		

## SPECIFICATIONS

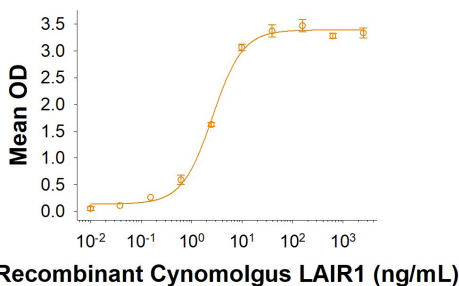
<b>SDS-PAGE</b>	58-64 kDa, under reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Bovine Collagen I is coated at 10 µg/mL, 100 µL/well, Recombinant Cynomolgus Monkey LAIR1 Fc Chimera binds with an ED <sub>50</sub> of 1-6 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

## PREPARATION AND STORAGE

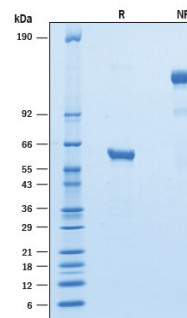
<b>Reconstitution</b>	Reconstitute at 500 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## DATA

### Binding Activity



### SDS-PAGE



## BACKGROUND

Leukocyte-associated Ig-like receptor-1 (LAIR1) is an inhibitory receptor of the Ig superfamily that is structurally related to inhibitory members of KIR and ILT/CD85 families (1-3). It is expressed on immune cells, including NK cells, T cells, B cells, monocytes, immature neutrophils, dendritic cells and most thymocytes (2-4). Cynomolgus LAIR-1 cDNA encodes a 296 amino acid (aa) polypeptide precursor. Based on the similarity with human LAIR1, it is likely to be a type I transmembrane (TM) protein containing a 21 aa signal sequence, a 144 aa extracellular domain (ECD), a 21 aa TM domain and a 110 aa cytoplasmic domain. Within ECD cynomolgus LAIR-1 shares 82% aa identity with human LAIR-1. LAIR-1 ECD includes one C2-type Ig-like domain. Tyrosine phosphorylation of two cytoplasmic ITIM motifs results in recruitment of phosphatases and down-regulation of signaling through activating receptors (2, 3, 5). Crosslinking of LAIR1 inhibits processes such as B cell receptor-mediated activation, NK cell and T cell cytotoxicity and basophil degranulation (1-3). LAIR1 shows high-affinity binding of collagens that results in inhibition of degranulation in a basophilic leukemia cell line (6).

## References:

1. Meyaard, L. (2003) *J. Biol. Regul. Homeost. Agents* **17**:330.
2. Meyaard, L. *et al.* (1997) *Immunity* **7**:283.
3. Lebbink, R.J. *et al.* (2004) *J. Immunol.* **172**:5535.
4. Verbrugge, A. *et al.* (2006) *J. Leukoc. Biol.* **79**:828.
5. Verbrugge, A. *et al.* (2003) *Int. Immunol.* **15**:1349.
6. Lebbink, R.J. *et al.* (2006) *J. Exp. Med.* **203**:1419.