Recombinant Human LILRA2/CD85h/ILT1

Catalog Number: 9040-T4

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human LILRA2/CD85h/ILT1 protein Gly24-Asn449, with a C-terminal 6-His tag Accession # NP_001124389
N-terminal Sequence Analysis	Gly24
Predicted Molecular Mass	48 kDa

SPECIFICATIONS

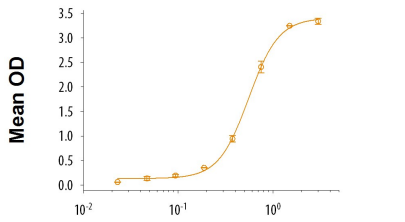
SDS-PAGE	70-81 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human LILRA2/CD85h/ILT1 is coated at 2 µg/mL, Recombinant Human Angiopoietin-like Protein 7/ANGPTL7. (Catalog # 914-AN) binds with a typical ED_{50} of 150-900 ng/mL.
Endotoxin Level	<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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 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

Bioactivity



Recombinant Human LILRA2/CD85h/ILT1 Protein Bioactivity When Recombinant Human LILRA2/CD85h/ILT1 (Catalog # 9040-T4) is coated at 2 µg/mL, Recombinant Human Angiopoietin-like 7 Protein (Catalog # 914-AN) binds with a typical ED_{50} of 150-900 ng/mL.

BACKGROUND

LILRA2, also known as ILT1, CD85h, and LIR7, is an approximately 70 kDa variably glycosylated transmembrane protein that regulates immune cell activation (1). Mature human LILRA2 consists of a 426 amino acid (aa) extracellular domain (ECD) with 4 Ig-like domains, a 21 aa transmembrane segment, and a 13 aa cytoplasmic tail (2). Alternative splicing generates isoforms with short deletions between the fourth Ig-like domain and the transmembrane region, and an isoform that is truncated C-terminal to the fourth Ig-like domain (3, 4). LILRA2 is expressed on monocytes, neutrophils, basophils, and eosinophils (5-7). It contains a positively charged arginine residue in its transmembrane segment, enabling association with the signaling protein Fcε RI gamma (5). Cross-linking of LILRA2 on monocytes induces the production of multiple cytokines as well as the upregulation of Fcγ receptors (6, 7). Cross-linking also restricts monocyte differentiation into immature dendritic cells, phagocytic activity, and antigen presentation to T cells (6, 7). R&D Systems in-house testing indicates that LILRA2 binds to Angiopoietin-like 7, consistent with the demonstrated functional interactions between other members of these protein families.

References:

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2. Borges, L. *et al.* (1997) J. Immunol. **159**:5192.
3. Jones, D.C. *et al.* (2009) Eur. J. Immunol. **39**:3195.
4. Mamegano, K. *et al.* (2008) Genes Immun. **9**:214.
5. Nakajima, H. *et al.* (1999) J. Immunol. **162**:5.
6. Lu, H.K. *et al.* (2012) PLoS One **7**:e33478.
7. Lee, D.J. *et al.* (2007) J. Immunol. **179**:8128.

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