

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived
Gly24-Glu443, with a C-terminal 6-His tag
Accession # AAB68668

N-terminal Sequence Analysis Gly24

Predicted Molecular Mass 47 kDa

SPECIFICATIONS

SDS-PAGE 60-69 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human LILRB3/CD85a/ILT5 is coated at 2 µg/mL, Recombinant Human Angiopoietin-like 7 (Catalog # 914-AN) binds with an ED₅₀ = 50-300 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

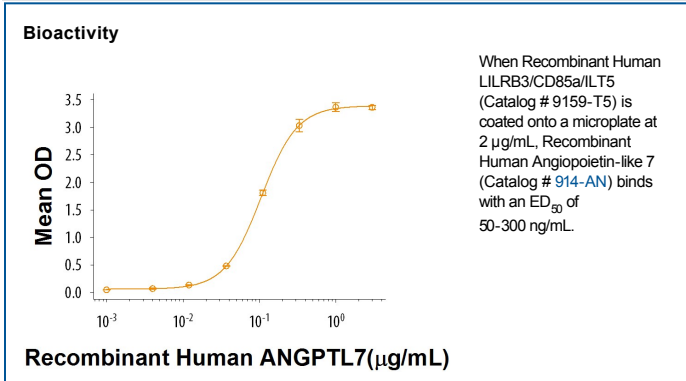
Reconstitution Reconstitute at 100 µg/mL in PBS.

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



BACKGROUND

Leukocyte immunoglobulin-like receptor subfamily B (LILRB3), also known as ILT5, LIR3, and CD85a, is an immunoglobulin superfamily member that is involved in immune regulation. Subfamily B members have cytoplasmic immunoreceptor tyrosine-based inhibitory motifs (ITIMs) that inhibit signaling events via phosphatase SHP-1. Subfamily A members are activating receptors that lack ITIMs and signal through association with FcRγ (1, 2). Mature LILRB3 is a highly polymorphic 85-95 kDa glycoprotein that consists of a 420 amino acid (aa) extracellular domain (ECD) with four Ig-like domains, a 21 aa transmembrane segment, and a 167 aa cytoplasmic domain with three ITIMs (3). Alternative splicing generates an isoform with a 17 aa insertion in the juxtamembrane ECD. In mouse and rat, the LILRB3 gene encodes the PIR-B protein which has six Ig-like domains. Rodent PIR-B and human LILRB3 share 55% aa sequence identity within common regions of their ECDs. LILRB3 is expressed on the surface of peripheral monocytes, neutrophils, eosinophils, basophils, and mast cell progenitors (4-6). Triggering of LILRB3 inhibits the activation of macrophages, mast cells, neutrophils, basophils, and B cells (5, 7). On osteoclast precursors, LILRB3 ligation inhibits RANK L/TRANCE or M-CSF induced differentiation (8). LILRB3 can also bind to ligands exposed on necrotic tumor cells (9). Both PIR-B and LILRB3 are receptors for *S. aureus*, and activation of these receptors by bacteria influences the innate immune response triggered by TLRs (3). R&D Systems in-house testing indicates that LILRB3 binds to Angiopoietin-like 7, consistent with the demonstrated functional interactions between other members of these protein families (10). In the mouse CNS, PIR-B functions as a receptor for the myelin proteins Nogo, MAG, and OMgp and mediates their inhibitory action on neurite outgrowth and axon regeneration (11). Upon binding to MAG, PIR-B associates with TrkB and NGF R/p75 in cerebellar granule neurons (12).

References:

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