Recombinant Human Intelectin-1/Omentin

Catalog Number: 9137-IN

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Trp17-Arg313 Accession # BAA96094
N-terminal Sequence Analysis	Trp17 & Thr19
Structure / Form	Disulfide-linked homotrimer
Predicted Molecular Mass	33 kDa

SPECIFICATIONS

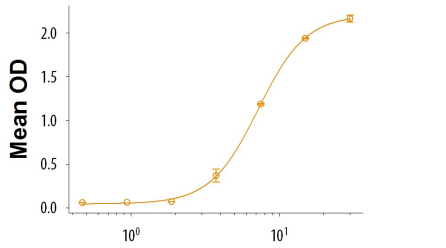
SDS-PAGE	36-42 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Streptococcus Pneumococcal Polysaccharide Type 70 is coated at 2 µg/mL (100 µL/well), Recombinant Human Intelectin-1/Omentin binds with a typical ED_{50} of 3-15 µg/mL.
Endotoxin Level	<0.10 EU 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 Tris. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in Water.
Shipping	The product is shipped with polar packs. 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



When Streptococcus Pneumococcal Polysaccharide Type 70 is coated at 2 µg/mL (100 µL/well), Recombinant Human Intelectin-1/Omentin binds (Catalog # 9137-IN) with a typical ED_{50} of 3-15 µg/mL.

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BACKGROUND

Intelectin-1, also known as Omentin, HL-1, and Lactoferrin Receptor, is a multifunctional protein that plays a protective role in the response to cardiovascular injury (1). Mature human Intelectin-1 contains one fibrinogen C-terminal domain (2-4) and shares 82% and 80% aa sequence identity with mouse and rat Intelectin-1, respectively. Intelectin-1 is expressed by vascular smooth muscle and endothelial cells (3, 5, 6), particularly in the heart, small intestine, colon, thymus, ovary, testis, and omental fat (2, 3, 6) as well as by intestinal Paneth cells and airway and intestinal goblet cells (7-9). It is presented as a 35-40 kDa GPI-anchored glycoprotein that forms disulfide-linked homotrimers (2, 4) and can be released into the circulation and bronchiolar lavage fluid (6, 8). It binds to microbial galactofuranosyl carbohydrates (2, 11) and additionally functions as a receptor for the iron-transporting protein Lactoferrin (4). Following cardiovascular injury, Intelectin-1 limits fibrosis, cardiac hypertrophy, and carotid artery intimal hyperplasia (12, 13) foam cell generation [5], smooth muscle cell proliferation, migration, and calcification (5, 12, 14), and it also promotes revascularization (15). In addition, Intelectin-1 inhibits osteoblast bone matrix mineralization (14), enhances insulin-stimulated uptake by adipocytes (6), supports neural stem cell viability (16), and inhibits the invasion and metastasis of neuroblastoma cells (17).

References:

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