Recombinant Human PGLYRP4/PGRP-Iβ

Catalog Number: 8389-PG

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Asp18-His373 with a C-terminal 6-His tag Accession # AAK72485
N-terminal Sequence Analysis	Asp18
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	40 kDa

SPECIFICATIONS

SDS-PAGE	53-64 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When peptidoglycan is coated at 1 µg/mL (100 µL/well), the concentration of Recombinant Human PGLYRP4/PGRP-Iβ that produces 50% optimal binding response is 0.5-3 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE with silver 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 500 µg/mL in sterile PBS.
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.

BACKGROUND

PGLYRP4, also known as PGRP-Iβ, is a member of the peptidoglycan recognition protein family of innate immunity proteins (1, 2). Human PGLYRP4 is expressed in the skin, eyes, salivary glands, throat, tongue, esophagus, stomach, and intestine (3). Mature human PGLYRP4 contains two nonidentical PGRP domains, and it shares 77% and 74% amino acid sequence identity with mouse and rat PGLYRP4, respectively (1, 4). It is secreted as disulfide-linked homodimers and binds peptidoglycan (PGN) and PGN-containing Gram-positive bacteria (1, 3). PGLYRP4 is directly bactericidal against pathogenic and nonpathogenic Gram-positive bacteria, but not normal flora bacteria, suggesting that normal flora bacteria have developed resistance to this bactericidal mechanism (3, 5, 6). Its bactericidal activity requires physiological concentrations of Zn^{2+} (6). PGLYRP4 knockout mice are more sensitive to the development of experimental dermatitis and DSS-induced colitis than wild type mice (2, 7). In humans, PGLYRP4 single nucleotide polymorphisms have been associated with inflammatory bowel disease and increased Parkinson's disease risk (8, 9).

References:

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