

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human GPIHBP1 protein		
	Human GPIHBP1 (Thr22-Gly151) Accession # Q8IV16	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence	Thr22		
Analysis			
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	41 kDa		

SPECIFICATIONS

SDS-PAGE	52-63 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Lipoprotein Lipase (Catalog # 9888-LL) is coated at 2 µg/mL (100 µL/well), the concentration of Recombinant Human GPIHBP1 Fc Chimera that produces 50% optimal binding response is 1.5-9 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 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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 °C under sterile conditions after reconstitution.

DATA

<p>Binding Activity</p> <p>When Recombinant Human Lipoprotein Lipase (Catalog # 9888-LL) is coated at 2 µg/mL, 100 µL/well, Recombinant Human GPIHBP1 Fc Chimera (Catalog # 10091-GB) binds with an ED₅₀ of 1.5-9 µg/mL.</p>	<p>SDS-PAGE</p> <p>2 µg/lane of Recombinant Human GPIHBP1 Fc Chimera was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 52-63 kDa and 100-130 kDa, respectively.</p>
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BACKGROUND

GPIHBP1 (Glycosylphosphatidylinositol-anchored high density lipoprotein-binding protein 1) is a member of the Ly6 family of proteins (1, 2). Human GPIHBP1 is synthesized as a 184 amino acid (aa) protein that includes a 20 aa signal peptide, a 131 aa GPIHBP1 chain containing the Ly6 domain, and a 33 aa propeptide. Within the main chain region, human GPIHBP1 shares 54% and 53% aa sequence identity with mouse and rat GPIHBP1, respectively. It is found on capillaries of heart, skeletal muscle, and adipose tissue (3), but not expressed in endothelial cells of larger blood vessels or expressed in capillaries of the brain (3, 4). GPIHBP1 binds both lipoprotein lipase (LPL) and chylomicrons (CM), and the acidic domain of GPIHBP1 is required for LPL binding (3, 5). Triglyceride-rich lipoproteins undergo lipolysis by LPL bound by GPIHBP1 and transported across the cells to the capillary lumen (6-7). GPIHBP1 is an important regulator of triglyceride metabolism by increasing the efficiency of hydrolysis by LPL and uptake of fatty acids (3, 8-9).

References:

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