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Recombinant Human LRP-1 Cluster IV Fc Chimera

Catalog Number: 5395-L4B

RDsystems

DESCRIPTION				
Source	Chinese Hamster Ovary cell line, CHO-derived human LRP-1 Cluster IV protein			
	Human LRP1-C4 (Ser3332-Asp3779) Accession # Q07954.2	IEGRMD	Human IgG ₁ (Pro100-Lys330)	
	N-terminus		C-terminus	
N-terminal Sequence Analysis	Ser3332			
Structure / Form	Disulfide-linked homodimer			
Predicted Molecular Mass	76.7 kDa			

SPECIFICATIONS		
SDS-PAGE	100-120 kDa, under reducing conditions.	
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human LRP-1 Cluster IV Fc Chimera (Catalog # 5395-L4B) is immobilized at 50 ng/mL (100 μL/well), Recombinant Human LRPAP (Catalog # 4296-LR) binds with an ED ₅₀ of 0.0250-0.350 ng/mL.	
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.	
Purity	>90%, 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 with Trehalose. 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 storils conditions offer reconstitution		

- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 $^\circ\text{C}$ under sterile conditions after reconstitution.

DATA



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Recombinant Human LRP-1 Cluster IV Fc Chimera Protein Binding Activity. When Recombinant Human LRP-1 Cluster IV Fc Chimera (Catalog # 5395-L4B) is immobilized at 50 ng/mL (100 µL/well), Recombinant Human LRPAP (Catalog # 4296-LR) binds with an ED₅₀ of 0.0250-0.350 ng/mL.

SDS-PAGE



Recombinant Human LRP-1 Cluster IV Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human LRP-1 Cluster IV Fc Chimera Protein (Catalog # 5395-L4B) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 100-120 kDa and 200-240 kDa, respectively.

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BACKGROUND

LDL receptor-related protein 1 (LRP-1), also known as CD91 and the α2-macroglobulin receptor, is a type I membrane protein in the LDL receptor superfamily. It is expressed on neurons, hepatocytes, adipocytes, vascular smooth muscle cells, fibroblasts, keratinocytes, macrophages, and megakaryocytes. LRP-1 is important for the clearance of a large number of circulating molecules involved in fatty acid metabolism and complexes of serine proteases with their inhibitors (1-4). LRP-1 also associates directly or through intracellular scaffold proteins with other membrane associated proteins on the same cell. This allows LRP-1 to modulate the activity or

internalization of PDGF R β , NMDA receptor subunits, TGF- β receptors, Frizzled-1, various integrins, and the prion protein PrP^C. Human LRP-1 is an N-glycosylated and sialylated molecule that is cleaved in the Golgi to produce an 85 kDa transmembrane β chain and a 515 kDa α chain that associates noncovalently with the β chain but does not itself cross the membrane (11, 12). The α chain of LRP-1 contains 31 LDLR class A repeats, 34 LDLR class B repeats, and 22 EGF-like repeats (13). The LDLR domains are clustered in four regions throughout the protein (13). Cluster IV (aa 3332-3779) contains eleven LDLR class A repeats (14). Within this region, human LRP-1 shares 99% as sequence identity with mouse and rat LRP-1. A shed soluble form of LRP-1 circulates in the serum and retains ligand binding properties (15). Cluster IV contains binding sites for Apolipoprotein E, LPL, and LRPAP/RAP, α 2-macroglobulin, Coagulation Factor VIII light chain, Lactoferrin, PAI-1, tPA-PAI-1 complexes, Pro-uPA, and TFPI (14).

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