

DESCRIPTION

Source	<i>Spodoptera frugiperda</i> , Sf 21 (baculovirus)-derived		
	Human CD36 (Gly30 - Asn439) Accession # P16671	IEGRMD	Human IgG ₁ (Pro100 - Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Gly30		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	73 kDa (monomer)		

SPECIFICATIONS

SDS-PAGE	93 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. Immobilized rhCD36/Fc Chimera at 2 µg/mL (100 µL/well) can bind rHTSP-2/His with a linear range of 0.05-2 µg/mL.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
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 sterile 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 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD36, alternatively known as platelet membrane glycoprotein IV (GP_{IV}), GPIIb, thrombospondin receptor, collagen receptor, fatty acid translocase (FAT), and scavenger receptor class B, member 3 (SR-B3), is an integral membrane glycoprotein that has multiple physiological functions (1). It is broadly expressed on a variety of cell types including microvascular endothelium, adipocytes, skeletal muscle, epithelial cells of the retina, breast, and intestine, smooth muscle cells, erythroid precursors, platelets, megakaryocytes, dendritic cells, monocytes/macrophages, and microglia (1, 2). As a member of the scavenger receptor family, CD36 is a multiligand pattern recognition receptor that interacts with a large number of structurally dissimilar ligands, including long chain fatty acid (LCFA), advanced glycation end products (AGE), thrombospondin-1, oxidized low-density lipoproteins (oxLDLs), high density lipoprotein (HDL), phosphatidylserine, apoptotic cells, β -amyloid fibrils (fA β), collagens I and IV, and *Plasmodium falciparum*-infected erythrocytes (3). CD36 is required for the anti-angiogenic effects of thrombospondin-1 in the corneal neovascularization assay (4). It plays a role in lipid metabolism and has been identified as a fatty acid translocase necessary for the binding and transport of LCFA in cells and tissues (5). CD36 has been implicated in the clearance of apoptotic cells and cell debris and has also been shown to mediate the internalization and degradation of a variety of its ligands such as oxLDL, AGE and fA β (3). Upon ligand binding, CD36 transduces signals that mediate a wide range of pro-inflammatory cellular responses (2). CD36 plays a significant role in the initiation and pathogenesis of chronic inflammatory diseases such as Alzheimer's disease and atherosclerosis (2, 3). The human CD36 gene encodes a single-chain 472 amino acid residue protein containing both an N- and a C-terminal cytoplasmic tail and an extracellular loop.

References:

1. Febbraio, M. *et al.* (2001) *J. Clin. Invest.* **108**:785.
2. Khoury, J. *et al.* (2003) *J. Exp. Med.* **197**:1657.
3. Husemann, J. *et al.* (2002) *Glia* **40**:195.
4. Armstrong, L and P. Bornstein (2003) *Matrix. Biol.* **22**:63.
5. Febbraio M. *et al.* (1999) *J. Biol. Chem.* **274**:19055.