

Background

CD36 (alternatively known as platelet membrane glycoprotein IV (GPIV), thrombospondin receptor, fatty acid translocase (FAT), and scavenger receptor class B, member 3 (SR-B3)) is an 88 kDa, integral membrane glycoprotein that belongs to the class B scavenger receptor family (1, 2). The molecule is described as being ditopic, with two transmembrane segments connected by an extracellular loop (3). Mouse CD36 is synthesized as a 472 amino acid (aa) protein that contains a 6 aa N-terminal cytoplasmic domain, a 22 aa N-terminal transmembrane segment, a 420 aa extracellular "loop", a 22 aa C-terminal transmembrane segment, and a 9 aa C-terminal cytoplasmic tail (4). Both cytoplasmic tails are palmitoylated, with the C-terminal tail involved in oxidized LDL binding (5, 6). With respect to the extracellular loop, the N-terminal region is believed to bind both thrombospondin-1 and Plasmodium-infected erythrocytes. Other ligands for CD36 include long-chain fatty acids, collagen, phospholipids and apoptotic cells (1). The extracellular loop of mouse CD36 is 94%, 92%, 84% and 84% aa identical to the extracellular loops of rat, hamster, human and bovine CD36, respectively. Cells known to express CD36 include capillary endothelium, adipocytes, skeletal muscle cells, intestinal epithelium, smooth muscle cells and hematopoietic cells such as RBC's, platelets and monocytes (1). On the surface of cells, CD36 is suggested to exist as a dimer in response to ligation (7). CD36 is reported to regulate fatty uptake, act as an angiogenic with TSP-1, and participate in the clearance of apoptotic phagocytes (1, 8).

References:

1. Febbraio, M. *et al.* (2001) *J. Clin. Invest.* **108**:795.
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3. Guarini, P. *et al.* (2000) *Biochem. Biophys. Res. Commun.* **275**:446.
4. Endemann, G. *et al.* (1993) *J. Biol. Chem.* **268**:11811.
5. Malaud, E. *et al.* (2002) *Biochem. J.* **364**:507.
6. Tao, N. *et al.* (1996) *J. Biol. Chem.* **271**:22315.
7. Daviet, L. *et al.* (1997) *Thromb. Haemost.* **78**:897.
8. Simantov, R. and R.L. Silverstein (2003) *Front. Biosci.* **8**:s874.

Description

Source	Chinese Hamster Ovary cell line, CHO-derived		
	Mouse CD36 (Gly30 - Lys439) Accession # Q3UAI3	IEGRMD	Human IgG ₁ (Pro100 - Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Gly30		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	72.9 kDa (monomer)		

Specifications

SDS-PAGE	100 - 130 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.

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NOT FOR USE IN HUMANS.