

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD36/SR-B3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse CD36 is observed.
Source	Monoclonal Rat IgG _{2B} Clone # 255606
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human CD36/SR-B3 Gly30-Asn439 Accession # P16671
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

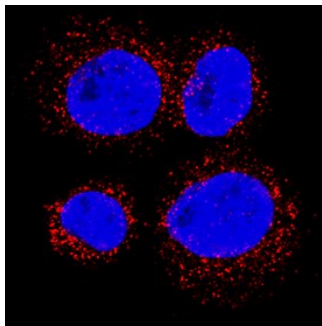
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10 ⁶ cells	HepG2 human hepatocellular carcinoma cell line
Immunocytochemistry	3-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Immunocytochemistry



CD36/SR-B3 in U937 Human Cell Line.
CD36/SR-B3 was detected in immersion fixed U937 human histiocytic lymphoma cell line using Rat Anti-Human CD36/SR-B3 Monoclonal Antibody (Catalog # MAB19551) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD36, alternatively known as platelet membrane glycoprotein IV (GPIV), 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 ($fA\beta$), 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 $fA\beta$ (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 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.