

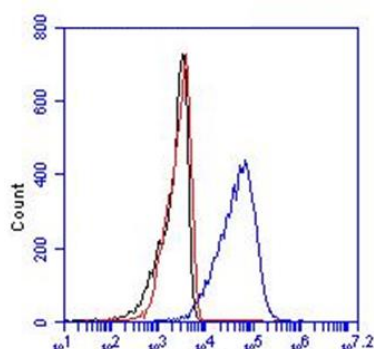
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	CD36, Human, clone FA6-152		
Catalog number	HM2122-100UG		
Lot number	-	Expiry date	-
Volume	1 ml	Amount	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Protein G
Storage	4°C		

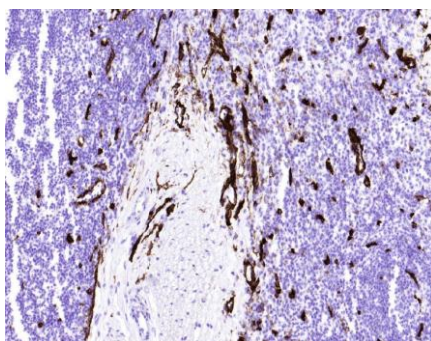
Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	5,4,7,8		1,4,6	1,11,12	2,9,10,12	3	2	
Yes	•		•	•	•	•	•	
No		•						
N.D.								•

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



FC: Flow cytometry: detection of CD36 in THP-1 cells. Red, black and blue line represent the isotype control, cells only and HM2122 with a concentration of 10 µg/ml, respectively.



IHC-F: Frozen sections of tonsil tissue. Staining especially in vascular endothelia. Concentration used of HM2122 was 1:50.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IHC-F: Tissue embedded in tissue-tek (for instance aortic tissue) followed by freezing in liquid nitrogen; 7-8 µm sections; air-dried; acetone-fixed; 10 % NGS as block (Ref 4).
- FC: Antibody FA6-152 stains the extracellular domain of CD36. Unfixed cells; 2µg per 100.000 cells. Positive on granulocytes (Ref 1).
- FS: Platelet aggregation and secretion was induced by > 1µg/ml antibody (Ref 2).
- IA: 10 µg/ml antibody as coat diluted in Tris-buffered saline ; 100 µl/well; o/n at RT (Ref 3).
- IF: unfixed cells were incubated for 30 minutes at 4 °C followed by a secondary FITC polyclonal antibody; one-minute methanol fixation before analysis (Ref 1).
- IP: 88 kDa sialoglycoprotein in platelets; 85 and 88 kDa in HEL cells. 10 µg antibody/200 µg protein.
- Positive control: THP-1 cells.

General Information

Description

Monoclonal antibody FA6-152 recognizes human CD36 (88-kDa), a cell surface class B scavenger receptor, also known as thrombospondin receptor CD36 is a heavily N-glycosylated transmembrane protein of ~88 kDa with two short intracellular domains and a large extracellular domain. The protein is sensitive for neuroaminidase, resulting in a shift from 88 to 85 kDa. CD36 is expressed on platelets, mature monocytes and macrophages, microvascular endothelial cells, mammary endothelial cells, during stages of erythroid cell development and on some macrophage derived dendritic cells. The antibody recognizes adult and fetal monocytes, platelets and reticulocytes, but does not stain lymphocytes and granulocytes. Reactivity has also been found in small intestine, kidney, liver and thyroid. CD36

expression is primarily controlled by the transcription heterodimer PPAR γ -RXR (peroxisome proliferator-activated receptor-g-retinoid-X-receptor). CD36 is preferentially found within lipid rafts, which facilitates its association with receptors, signaling and adaptor molecules. It is a receptor and transporter of oxidized lipids and long chain fatty acids. CD36 has been implicated in many biological processes including angiogenesis, phagocytosis, inflammation, and lipid and glucose metabolism. Several in vivo models support the role of the thrombospondin / CD36 system in angiogenesis and tumor growth. An important role for CD36 has been found in Malaria as major receptor for *P. falciparum*-infected red blood cells. CD36 is associated with Src-family kinases and with the integrins $\alpha 3\beta 1$ and $\alpha 6\beta 1$. Recently, CD36 has been identified as a protein that is required for toll like receptor (TLR2) recognition of di-acylated bacterial lipopeptides and lipoteichoic acid 4. Furthermore, CD36 has been shown to function as phagocytic receptor for apoptotic cells. Many different ligands have been reported to interact with CD36, suggesting that CD36 could recognize a structure-based domain rather than specific contact residues. Monoclonal antibody FA6-152 blocks the biological activity of CD36 by blocking collagen/thrombospondin binding. The antibody agglutinates fetal but not adult erythrocytes.

Immunogen	20-Weeks-old fetal erythrocytes
Aliases	GP1V, Fatty acid translocase (FAT), platelet glycoprotein 4, PAS IV, Platelet collagen receptor, thrombospondin receptor
Gene	Gene name: CD36
References	<ol style="list-style-type: none"> 1. Edelman P et al; A monoclonal antibody against an erythrocyte ontogenic antigen identifies fetal and adult erythroid progenitors. <i>Blood</i> 1986, 67: 56. 2. Kieffer N et al; Development regulated expression of a 78 kDa erythroblast membrane glycoprotein immunologically related to the platelet thrombospondin receptor. <i>Biochem J</i> 1989, 262: 835 3. Thibert V et al; Quantitation of platelet glycoprotein IV (CD36) in healthy subjects and in patients with essential thrombocythemia using an immunocapture assay. <i>Thromb Haemost</i> 1992, 68: 600 4. Nakata, A et al; CD36, a novel receptor for oxidized low-density lipoproteins, is highly expressed on lipid-laden macrophages in human atherosclerotic aorta. <i>Arterioscler Thromb Vasc Biol</i> 1999, 19: 1333 5. Ehara, S et al; Pathophysiological role of oxidized low-density lipoprotein in plaque instability in coronary artery diseases. <i>J Diab Complic</i> 2002, 16: 60 6. Leonarduzzi, G et al; Oxidation as a crucial reaction for cholesterol to induce tissue degeneration: CD36 overexpression in human promonocytic cells treated with a biologically relevant oxysterol mixture, <i>Aging Cell</i> 2008, 7: 375 7. Leonarduzzi, G et al; Molecular signaling operated by a diet-compatible mixture of oxysterols in up-regulating CD36 receptor in CD68 positive cells, <i>Mol. Nutr. Food Res.</i> 2010, 54: S31 8. Finn, A et al; Hemoglobin Directs Macrophage Differentiation and Prevents Foam Cell Formation in Human Atherosclerotic Plaques, <i>J Am Coll Cardiol.</i> 2012, 59:166 9. Gamba, P. et al. Interaction between 24-hydroxycholesterol, oxidative stress, and amyloid-β in amplifying neuronal damage in Alzheimer's disease: three partners in crime. <i>Aging Cell</i> 2011, 10: 403 10. Grange, P.A. et al Production of Superoxide Anions by Keratinocytes Initiates <i>P. acnes</i>-Induced Inflammation of the Skin. <i>Plos Pathogens</i> 2009, 5:1000527 11. Barth, H et al. Scavenger Receptor Class B Is Required for Hepatitis C Virus Uptake and Cross-Presentation by Human Dendritic Cells. <i>J of Virol.</i> 2008, 82: 3466 12. Nilsen, N et al. Cellular trafficking of lipoteichoic acid and Toll-like receptor 2 in relation to signaling; role of CD14 and CD36. <i>Journal of Leukocyte Biology</i> 2008, 84:280
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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Approved by Manager of QC
Brenda Teunissen

Date
02/12/2019

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