

**MONOCLONAL ANTIBODY TO  
HUMAN CD46, MEMBRANE COFACTOR PROTEIN  
clone M177**



<b>Catalog nr</b>	HM2103 (lot number and expiry date are indicated on the label)
<b>Description</b>	<p>CD46, also designated membrane cofactor protein, is a 45-70 kDa protein with genetic and tissue-specific heterogeneity. It is expressed on every cell and tissue, with the exception of erythrocytes. CD46 serves to down-regulate the activation of complement on host tissue. It performs this function by serving as a cofactor which binds to C3b and C4b. This binding is permitted by factor I, a serine protease of plasma, to degrade C3b and C4b and serves to protect the host cell against autologous attack. It also serves as a receptor for measles virus.</p> <p>Four isoforms of CD46 predominate and arise by alternative splicing of a single CD46 gene. The isoforms differ in the length. CD46 cDNA encodes a signal sequence followed by four complement control protein domains (also called short consensus repeats (SCR)). The monoclonal antibody M177 reacts with the SCR2 domain.</p>
<b>Species</b>	Mouse IgG <sub>1</sub>
<b>Formulation</b>	1 ml (100 µg/ml) 0.2 µm filtered antibody solution in PBS, containing 0.1% bovine serum albumin.
<b>Application</b>	The monoclonal antibody M177 can be used for flow cytometry, immuno assays for coating and detection, immunohistology on both frozen and paraffin embedded tissues. Furthermore the antibody is useful for immuno precipitation, Western blotting under non-reduced conditions and for inhibition of biological activity.
<b>Use</b>	For immunohistology, flow cytometry and Western blotting 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 1:10. For inhibition of biological activity <i>in vitro</i> dilutions have to be made according to the amounts of CD46 to be inactivated.
<b>Storage and stability</b>	Product should be stored at 4°C. Under recommended storage conditions, product is stable for one year.
<b>Precautions</b>	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 with the use of or derivation of this product.
<b>References</b>	<ol style="list-style-type: none"><li>1. Kurita-Taniguchi, M et al; Functional modulation of human macrophages through CD46 (Measles virus receptor): production of IL-12 p40 and nitric oxide in association with recruitment of protein-tyrosine phosphatase SHP-1 to CD46. <i>J Immunol</i> 2000, <i>165</i>: 5143</li><li>2. Hirano, A et al; Ligation of human CD46 with purified complement C3b or F(ab')<sub>2</sub> of monoclonal antibodies enhances isoform-specific interferon gamma-dependent nitric oxide production in macrophages. <i>J Biochem</i> 2002, <i>132</i>: 83</li><li>3. Kurita-Taniguchi, M et al; Molecular assembly of CD46 with CD9, alpha3-beta1 integrin and protein tyrosine phosphatase SHP-1 in human macrophages through differentiation by GM-CSF. <i>Mol Immunol</i> 2001, <i>38</i>: 689</li><li>4. Seya, T et al; Quantitative analysis of membrane cofactor protein (MCP) of complement. High expression of MCP on human leukemia cell lines, which is down-regulated during cell differentiation. <i>J Immunol</i> 1990, <i>145</i>: 238</li></ol>
<b>Also available</b>	HM2103F      FITC conjugated monoclonal antibody against Human CD46, clone M177 HM2105      Monoclonal antibody against Human CD55, clone D17 HM2107      Monoclonal antibody against Human CD35, clone 31R