

**MONOCLONAL ANTIBODY TO
MOUSE COMPLEMENT COMPONENT 5 (C5)
clone BB5.1**



Catalog no	HM1073-5b (lot number and expiry date are indicated on the label)										
Description	<p>The monoclonal antibody BB5.1 recognises the fifth component of mouse complement (C5). C5 is a glycoprotein consisting of two disulfide-linked polypeptide chains present in serum in a concentration of 50-80 µg/ml. C5 is involved in the activation of the lytic pathway within the complement system. The complement system is an important factor in innate immunity. The complement pathways can be divided in the activation pathways and the lytic pathway. The activation pathways (classical, mannose-binding-lectin, alternative) lead via C3 to the cleavage of C5 into C5a and C5b. Binding of C5b is the initial step in the formation of the membrane attack complex (MAC), that typically forms on the surface of intruding pathogenic bacterial cells. The complex is composed of four complement proteins C5b, C6, C7 and C8 and many copies of C9.</p> <p>Monoclonal antibody BB5.1 showed to precipitate the two chains of C5 from normal mouse serum and inhibited C5-dependent hemolysis in a functional complement test. Furthermore, BB5.1 administration completely inhibited terminal complement activity in murine models for antibody-mediated rejection (AMR) during heart and kidney transplantation. In yet another mouse model, both pretreatment as well as intervention with monoclonal antibody BB5.1 attenuated disease development during anti-MPO IgG-induced glomerulonephritis.</p> <p>Blockage of C5 activation by BB5.1 protected against renal ischemia-reperfusion injury by inhibition of late apoptosis and inflammation. In Lupus disease, combination therapy of anti-IL-10/anti-C5 (BB5.1) could both prevent and reduce the effect of the humoral immune response.</p>										
Species	Mouse IgG ₁										
Formulation	5 mg 0.2 µm filtered antibody solution in PBS (exact concentration is indicated on the label).										
Application	The monoclonal antibody BB5.1 can be used for immunohistology on frozen sections and immuno precipitation. Furthermore, the monoclonal antibody BB5.1 is useful for functional studies and immunoassay.										
Use	For immunohistology 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. For functional studies, <i>in vitro</i> dilutions have to be optimized in user's experimental setting. For information can be found in the certificate of quality.										
Storage and stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for 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 with the use or derivation of this product.										
References	<ol style="list-style-type: none">1. Frei, Y et al; Generation of a monoclonal antibody to mouse C5 application in an ELISA assay for detection of anti-C5 antibodies. <i>Mol Cell Probes</i> 1987, 1: 1412. Thurman, J et al; C3a is required for the production of CXC chemokines by tubular epithelial cells after renal ischemia/reperfusion. <i>J Immunol</i> 2007, 178: 18193. Mihai, S et al; The alternative pathway of complement activation is critical for blister induction in experimental epidermolysis bullosa acquisita. <i>J Immunol</i> 2007, 178: 65144. Wang, H et al; Inhibition of terminal complement components in presensitized transplant recipients prevents antibody-mediated rejection leading to long-term graft survival and accommodation. <i>J Immunol</i> 2007, 179: 44515. Rother, R et al; C5 blockade with conventional immunosuppression induces long-term graft survival in presensitized recipients. <i>Am J Transplant</i> 2008, 8: 1129										
Also available	<table><tr><td>HM1096</td><td>Monoclonal antibody against Mouse C1q, clone JL-1</td></tr><tr><td>HM1045</td><td>Monoclonal antibody against Mouse C3, clone 11H9</td></tr><tr><td>HM1046</td><td>Monoclonal antibody against Mouse C4, clone 16D2</td></tr><tr><td>HP8013</td><td>Polyclonal antibody against Mouse C5</td></tr><tr><td>HM1051</td><td>Monoclonal antibody against Mouse Myeloperoxidase, clone 8F4</td></tr></table>	HM1096	Monoclonal antibody against Mouse C1q, clone JL-1	HM1045	Monoclonal antibody against Mouse C3, clone 11H9	HM1046	Monoclonal antibody against Mouse C4, clone 16D2	HP8013	Polyclonal antibody against Mouse C5	HM1051	Monoclonal antibody against Mouse Myeloperoxidase, clone 8F4
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