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Hycult biotechnology

C5, Clone BB5.1, Mouse mAb

Catalog No.	HM1073	**Quantity:**	100 µg

Description: The monoclonal antibody BB5.1 reacts with 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 which is an important factor in innate immunity. The complement pathways can be divided in the activation pathway and lytic pathway. The activation pathways lead via C3 to the cleavage of the fifth complement component C5 into C5a and C5b. 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, mAb BB5.1 administration showed complete inhibition of terminal complement activity in mouse models for antibody-mediated rejection (AMR) during heart and kidney transplantation. In yet another mouse model, both pretreatment as well as intervention with mAb BB5.1 attenuated disease development during anti-MPO IgG-induced glomerulonephritis. Blockage of C5 activation by BB5.1 also 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.

Specificity: BB5.1 is specific for the fifth component of mouse complement (C5).

Host: Mouse

Isotype: IgG1

Clone: BB5.1

Formulation: Sterile filtered liquid in a buffer of PBS + 0.1% bovine serum albumin.

Applications: 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.
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, *in vitro* dilutions have to be optimized in user's experimental setting.

Storage & Stability: Product should be stored at 4°C. Under recommended storage conditions, product is stable for one year.

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References:

1. Frei, Y et al; Generation of a monoclonal antibody to mouse C5 application in an ELISA assay for detection of anti-C5 antibodies. Mol Cell Probes 1987, *1*: 141
2. Thurman, J et al; C3a is required for the production of CXC chemokines by tubular epithelial cells after renal ischemia/reperfusion. J Immunol 2007, *178*: 1819
3. Mihai, S et al; The alternative pathway of complement activation is critical for blister induction in experimental epidermolysis bullosa acquisita. J Immunol 2007, *178*: 6514
4. 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. J Immunol 2007, *179*: 4451
5. Rother, R et al; C5 blockade with conventional immunosuppression induces long-term graft survival in presensitized recipients. Am J Transplant 2008, *8(6)*: 1129

Also available:

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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