

**AM32961PU-N****Monoclonal Antibody to CD59 - Purified****Alternate names:**

20 kDa homologous restriction factor, HRF-20, HRF20, MAC-IP, MAC-inhibitory protein, MACIF, MEM43 antigen, MIC11, MIN1, MIN2, MIN3, MIRL, MSK21, Membrane attack complex inhibition factor, Membrane inhibitor of reactive lysis, Protectin

**Quantity:**

0.1 mg

**Concentration:**

0.1 mg/ml

**Background:**

CD59 regulates the formation and function of the lytic C5b-9 complex by binding C8 and preventing the unfolding and membrane insertion of C9 and by binding C9 and restricting its polymerization. CD59 is a small (18 - 25 kDa) molecule, linked to the cell membrane through a glycosyl phosphatidylinositol (GPI) anchor and comprising 77 amino acids with a single N-linked carbohydrate group at Asn-18. Analogues of CD59 can be found in all species with similar structures and sizes. In contrast to all other species, mice have two genes encoding a CD59a and a CD59b protein. These two molecules are 63% identical at the amino acid level and share all major structural features. CD59a is broadly distributed on endothelia, erythrocytes, platelets and on numerous other cell types in organs, a distribution pattern resembling that of CD59 in other species. Expression of CD59b is restricted to germ cell elements in the testis and mature spermatozoa. Both CD59a and CD59b inhibit human and rodent complement with similar efficiency. CD59 may be involved in rheumatoid arthritis, motor nerve injury in the Guillain-Barré syndrome and in other diseases where defective inhibition of complement activation on self tissue is involved. Furthermore, CD59 may play an important part in abrogating the effects of complement attack in renal disease. Its presence and protective effect have already been demonstrated on human renal cells.

**Uniprot ID:**[O55186](#)**NCBI:**[NP\\_001104530.1](#)**GeneID:**[12509](#)**Host / Isotype:**

Mouse / IgG1

**Recommended Isotype Controls:**

AM03095PU-N

**Clone:**

7A6

**Immunogen:**

mCD59a-Fc

**Format:**

**State:** Liquid 0.2 µm filtered Ig fraction  
**Purification:** Protein G Chromatography  
**Buffer System:** PBS  
**Stabilizers:** 0.1% BSA

**Applications:**

**Immuno Assays.**  
**Western blot.**  
**ImmunoFluorescence.**  
**Flow Cytometry.**

**Functional Studies.****Immunohistochemistry on Frozen Sections.**

The typical starting working dilution is 1/50.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:**

The monoclonal antibody 7A6 (previously known as mCD59.3) recognizes Mouse CD59a, a potent inhibitor of the complement membrane attack complex (MAC) action.

**Species Reactivity:**

**Tested:** Mouse.

**Storage:**

Store undiluted at 2-8°C.

**DO NOT FREEZE!**

Shelf life: one year from despatch.

**General Readings:**

1. Harris CL, Hanna SM, Mizuno M, Holt DS, Marchbank KJ, Morgan BP. Characterization of the mouse analogues of CD59 using novel monoclonal antibodies: tissue distribution and functional comparison. *Immunology*. 2003 May;109(1):117-26. PubMed PMID: 12709025.
2. Williams AS, Mizuno M, Richards PJ, Holt DS, Morgan BP. Deletion of the gene encoding CD59a in mice increases disease severity in a murine model of rheumatoid arthritis. *Arthritis Rheum*. 2004 Sep;50(9):3035-44. PubMed PMID: 15457473.
3. Willison, H et al; The role of complement and complement regulators in mediating motor nerve terminal injury in murine models of Guillain–Barré syndrome, *J Neuroimmunol* 2008, 201-202: 172
4. Yang P, Tyrrell J, Han I, Jaffe GJ. Expression and modulation of RPE cell membrane complement regulatory proteins. *Invest Ophthalmol Vis Sci*. 2009 Jul;50(7):3473-81. doi: 10.1167/iovs.08-3202. Epub 2009 Jan 24. PubMed PMID: 19168900.