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Mouse Monoclonal Antibody to C1QA

Purified Mouse Monoclonal Antibody
Catalog # AO2438a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P02745
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1C7G3
Isotype	Mouse IgG2b
Calculated MW	26017
Description	This gene encodes a major constituent of the human complement subcomponent C1q. C1q associates with C1r and C1s in order to yield the first component of the serum complement system. Deficiency of C1q has been associated with lupus erythematosus and glomerulonephritis. C1q is composed of 18 polypeptide chains: six A-chains, six B-chains, and six C-chains. Each chain contains a collagen-like region located near the N terminus and a C-terminal globular region. The A-, B-, and C-chains are arranged in the order A-C-B on chromosome 1. This gene encodes the A-chain polypeptide of human complement subcomponent C1q.;
Immunogen	Purified recombinant fragment of human C1QA (AA: 23-167) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000; FCM: 1/200 - 1/400

Additional Information

Gene ID	712
Other Names	Complement C1q subcomponent subunit A, C1QA
Dilution	WB~~1:1000 IHC~~1:100~500 FC~~1:10~50 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Monoclonal Antibody to C1QA is for research use only and not for use in diagnostic or therapeutic procedures.

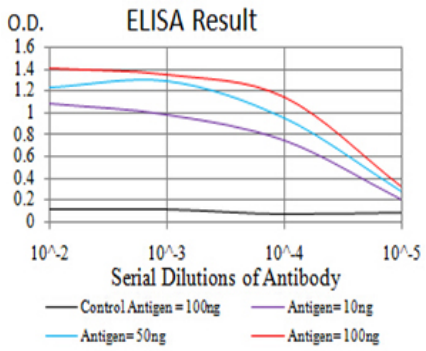
Protein Information

Name	C1QA {ECO:0000303|PubMed:1706597, ECO:0000312|HGNC:HGNC:1241}
Function	Core component of the complement C1 complex, a multiprotein complex that initiates the classical pathway of the complement system, a cascade of proteins that leads to phagocytosis and breakdown of pathogens and signaling that strengthens the adaptive immune system (PubMed:12847249, PubMed:19006321, PubMed:24626930, PubMed:29449492, PubMed:3258649, PubMed:34155115, PubMed:6249812, PubMed:6776418). The classical complement pathway is initiated by the C1Q subcomplex of the C1 complex, which specifically binds IgG or IgM immunoglobulins complexed with antigens, forming antigen-antibody complexes on the surface of pathogens: C1QA, together with C1QB and C1QC, specifically recognizes and binds the Fc regions of IgG or IgM via its C1q domain (PubMed:12847249, PubMed:19006321, PubMed:24626930, PubMed:29449492, PubMed:3258649, PubMed:6776418). Immunoglobulin-binding activates the proenzyme C1R, which cleaves C1S, initiating the proteolytic cascade of the complement system (PubMed:29449492). The C1Q subcomplex is activated by a hexamer of IgG complexed with antigens, while it is activated by a pentameric IgM (PubMed:19706439, PubMed:24626930, PubMed:29449492). The C1Q subcomplex also recognizes and binds phosphatidylserine exposed on the surface of cells undergoing programmed cell death, possibly promoting activation of the complement system (PubMed:18250442).
Cellular Location	Secreted. Cell surface. Note=Specifically binds IgG or IgM immunoglobulins complexed with antigens, forming antigen-antibody complexes on the surface of pathogens.

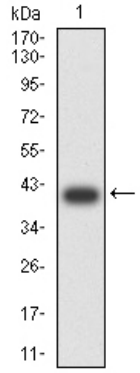
References

1.Immunology. 2012 May;136(1):78-85. ; 2.Br J Cancer. 2010 Apr 13;102(8):1294-9.;

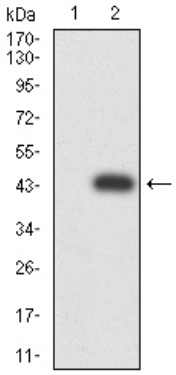
Images



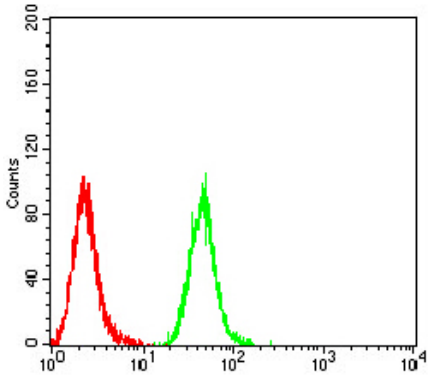
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



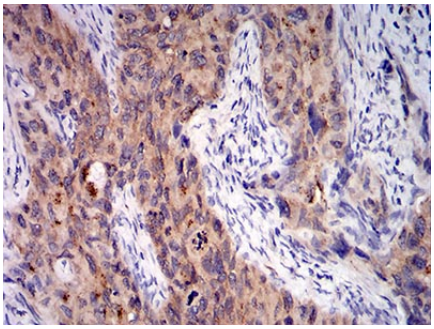
Western blot analysis using C1QA mAb against human C1QA (AA: 23-167) recombinant protein. (Expected MW is 40.6 kDa)



Western blot analysis using C1QA mAb against HEK293 (1) and C1QA (AA: 23-167)-hIgGFc transfected HEK293 (2) cell lysate.



Flow cytometric analysis of Hela cells using C1QA mouse mAb (green) and negative control (red).



Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using C1QA mouse mAb with DAB staining.