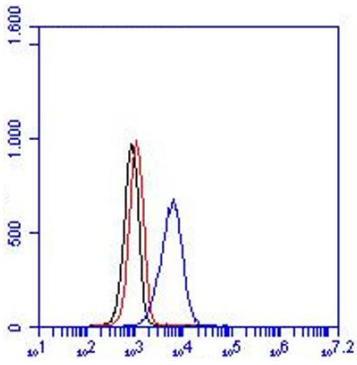
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	gC1q-R, Human, clone 60.11, FITC conjugated		
Catalog number	HM2014F-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	FITC
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		5		1,3,6	4,5,7	1,2,4,6	4	1,2
Yes		●		●	●	●	●	●
No								
N.D.	●		●					

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



FC: Flow cytometry with THP-1 cells. The black line represents cells only, the red line the isotype control and the blue line antibody HM2014 in a concentration of 2 µg/ 250000 cells.

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.

- IA: Antibody 60.11 can be used as capture and detection antibody.
- W: The expected band size is ~33 kDa.

General Information

Description

The monoclonal antibody 60.11 recognizes a cell membrane C1q binding molecule that recognises the globular heads of C1q. It is also present in plasma and the extracellular matrix. The molecule is an unusually acidic, single chain protein with an apparent molecular weight of 33 kDa. It does not possess a conventional sequence motif compatible with a membrane spanning segment nor a consensus site for a GPI anchor. gC1q-R migrates as a single chain under both reducing and non-reducing conditions, but it behaves as an oligomer on gel-filtration in non-dissociating conditions. Its multimer formation may be a critical process by which the gC1q-R molecule increases its affinity for multivalent ligands such as C1q. gC1q-R has been shown to inhibit complement activation by preventing the binding of C1q to antibodies, suggesting that the binding site for gC1q-R and the binding site for immune complexes, which are present on the C1q globular 'heads', may be located at the same position. gC1q-R is capable of interacting with several proteins involved in blood clotting, namely, thrombin, prothrombin, the heparinbinding form of vitronectin, the ternary complex, vitronectin-thrombin-antithrombin, as well as high-molecular-weight kininogen and Hageman factor. Besides its role in the complement pathway, gC1q-R participates in enhancement of Fc-receptor and CR1-mediated phagocytosis, procoagulant activity on platelets, and chemotactic activity on mast cells, eosinophils, neutrophils, and fibroblasts. gC1q-R is expressed on a wide variety of cells and can serve as a binding site for plasma and microbial

proteins. Its antigenic sites may be cryptic on cells in suspension but become exposed when the cells are fixed by bifunctional cross-linkers. Probably it is also expressed on the cell membrane as a tetramer. Crosslinking or activation may thus bring about a tetrameric assembly of gC1q-R followed by a conformational change within the molecule, thereby exposing epitopes which are otherwise hidden. A form of GC1q-R is also found inside the cell. Intracellular gC1q-R has been shown to bind the cytoplasmic tail of the α1B-adrenergic receptor and to PKCμ. The monoclonal antibody 60.11 is directed against epitopes situated within the NH2-terminal stretch of gC1q-R corresponding to residues 76-93. Clone 60.11 recognizes the putative C1q binding site and reacts with the mature form, but has poor or no reactivity with the truncated form, lacking residues 74-95.

Immunogen Recombinant GC1q-R corresponding to mature GC1q-R (amino acids 74-282)

Aliases Complement component 1 Q subcomponent-binding protein, mitochondrial, ASF/SF2-associated protein p32, Glycoprotein gC1qBP, C1qBP, Hyaluronan-binding protein 1, Mitochondrial matrix protein p32, p33

Gene Gene name: C1QBP, GC1QBP, HABP1, SF2P32

Cross reactivity Rat: Yes (ref.5); Syrian hamster: Yes.

References

1. Ghebrehiwet, B et al; Identification of functional domains on gC1Q-R, a cell surface protein that binds to the globular "heads" of C1Q, using monoclonal antibodies and synthetic peptides. Hybridoma 1996, *5*: 333
2. Ghebrehiwet, B et al; Evidence that the two C1q binding membrane proteins, gC1q-R and cC1q-R, associate to form a complex. J Immunol 1997, *159*: 1429
3. Ghebrehiwet, B et al; gC1q-R/p33, a member of a new class of multifunctional and multicompartmental cellular proteins, is involved in inflammation and infection. Immunol Rev 2001, *180*: 65
4. Grace, K et al; Surface expression of complement receptor gC1q-R/p33 is increased on the plasma membrane of human spermatozoa after capacitation. Biol Reprod 2002, *66*: 823
5. Peerschke, E et al; gC1qR/p33 blockade reduces *Staphylococcus aureus* colonization of target tissues in an animal model of infective endocarditis. Infect Immun 2006, *74*: 4418
6. Sansonno, D et al; Role of the receptor for the globular domain of C1q protein in the pathogenesis of hepatitis C virau-related cryoglobulin vascular damage. J Immunol 2009, *183*: 6013
7. Ghebrehiwet, B et al, Monocyte expressed macromolecular C1 and C1q receptors as molecular sensors of danger: implications in SLE. Fron in Immunol 2014, *5*:1

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

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