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CD21 / CR2 / C3d-Receptor / EBV-Receptor Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone FR5A10]
Catalog # AH11127

Product Information

Application	IF, FC, IHC-F
Primary Accession	P20023
Other Accession	1380, 445757
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	FR5A10
Calculated MW	112916

Additional Information

Gene ID	1380
Other Names	Complement receptor type 2, Cr2, Complement C3d receptor, Epstein-Barr virus receptor, EBV receptor, CD21, CR2, C3DR
Application Note	IF~~1:50~200 FC~~1:10~50 IHC-F~~N/A
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD21 / CR2 / C3d-Receptor / EBV-Receptor Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CR2
Synonyms	C3DR
Function	Serves as a receptor for various ligands including complement component CD3d, HNRNPU OR IFNA1 (PubMed:1849076, PubMed:21527715, PubMed:7753047). When C3d is bound to antigens, attaches to C3d on B- cell surface and thereby facilitates the recognition and uptake of antigens by B-cells (PubMed:21527715). This interaction enhances B-cell activation and subsequent immune responses. Forms a complex with several partners on the surface of B-cells including CD19, FCRL5 and CD81, to form the B-cell coreceptor complex that plays a crucial role in B-cell activation and signaling (PubMed:1383329, PubMed:30107486). Also induces specific intracellular signaling separately from the BCR and CD19 by activating the tyrosine kinase

	SRC, which then phosphorylates nucleolin/NCL and triggers AKT and GSK3 kinase activities in a SYK/CD19-independent manner (PubMed:12938232). Acts as a ligand for CD23 (FcepsilonRII), a low-affinity receptor for IgE, which is expressed on B-cells and other immune cells, and thus participates in the regulation of IgE production (PubMed:1386409).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Mature B-lymphocytes, T-lymphocytes, pharyngeal epithelial cells, astrocytes and follicular dendritic cells of the spleen

Background

Recognizes a protein of 140kDa, which is identified as the complement receptor 2 (CR2)/CD21. Its epitope is located in 5-8 short consensus repeats (SCRs). This MAb is highly specific to CR2 and shows no cross-reaction with CR1. This protein is expressed strongly on mature B cells, follicular dendritic cells and weakly on immature thymocytes and T lymphocytes. In B-cell ontogeny, CD21 appears after the pre-B-stage, is maintained during peripheral B-cell development and is lost upon terminal differentiation into plasma cells. CD21 expression is also gradually lost after stimulation of B cells in vitro. CD21 functions as receptor for C3d, C3dg and iC3b Complement components, for EBV and for IFNalpha. CD21 binds to CD23 and associates with CD19, CD81 and Leu13 to form a large signal-transduction complex involved in B cell activation. MAb FR5A10 can be used for EBV receptor studies, interactions between B and T cells especially through CD23, human complement receptor (CR2) studies and IFN-alpha receptor studies.

References

Schlossman SF et al. eds Leukocyte Typing V, p516-522, Oxford University Press, Oxford, 1995. | Aubry JP et al.In Schlossman SF et al eds. Leukocyte Typing V, p535-536, Oxford University Press, Oxford, 1995

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