

Monoclonal Antibody to CD21 - FITC

Alternate names:	C3DR, C3d receptor, CR2, Complement C3d receptor, Complement receptor type 2, Dendritic Cell Marker, EBV Receptor, Epstein-Barr virus receptor
Catalog No.:	AM03064FC-N
Quantity:	100 Tests
Background:	CD21 (complement receptor 2, CR2) binds C3 complement fragments, especially its breakdown fragments, which remain covalently attached to complement activating surfaces or antigen. CD21 has important roles in uptake and retention of immunocomplexes, survival of memory B cells and in development and maintenance of the humoral response to T-dependent antigens. CD21 also serves as a key receptor for Epstein-Barr virus binding and is involved in targeting prions to follicular dendritic cells and expediting neuroinvasion following peripheral exposure to prions. A soluble form of the CD21 (sCD21) is shed from the lymphocyte surface and retains its ability to bind respective ligands.
Uniprot ID:	P20023
NCBI:	9606
Host / Isotype:	Mouse / IgG1
Clone:	LT21
Immunogen:	IM9 human B-lymphoblastoid cell line
Format:	State: Liquid purified IgG fraction Buffer System: PBS Preservatives: 15 mM Sodium Azide Stabilizers: 0.2% (w/v) high-grade BSA (Protease free) Label: FITC – Conjugated with Fluorescein isothiocyanate under optimum conditions.
Applications:	Flow Cytometry analysis of Human blood cells using 20 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	The antibody <i>LT21</i> reacts with CD21 (CR2), a 145 kDa transmembrane glycoprotein (complement C3d receptor - C3dR) expressed on B lymphocytes, follicular dendritic cells, some epithelial cells and a subsets of T lymphocytes. It is not expressed on immature B cells. Species: Human, Porcine, Bovine, Canine. Other species not tested.

Storage:

Store undiluted at 2-8°C.

DO NOT FREEZE!

This product is photosensitive and should be protected from light.

Shelf life: one year from despatch.

General Readings:

1. Roozendaal R, Carroll MC. Complement receptors CD21 and CD35 in humoral immunity. *Immunol Rev.* 2007 Oct;219:157-66. PubMed PMID: 17850488.
2. Twohig J, Kulik L, Haluszczak C, Reuter J, Rossbach A, Bull M, et al. Defective B cell ontogeny and immune response in human complement receptor 2 (CR2, CD21) transgenic mice is partially recovered in the absence of C3. *Mol Immunol.* 2007 Jul;44(13):3434-44. Epub 2007 Mar 26. PubMed PMID: 17379312.
3. Kasprzak A, Spachacz R, Wachowiak J, Stefanska K, Zabel M. Epstein-Barr virus (EBV) infection in B-cell non-Hodgkin's lymphomas in children: virus latency and its correlation with CD21 and CD23 molecules. *Folia Histochem Cytobiol.* 2007;45(3):169-79. PubMed PMID: 17951165.
4. Zabel MD, Heikenwalder M, Prinz M, Arrighi I, Schwarz P, Kranich J, et al. Stromal complement receptor CD21/35 facilitates lymphoid prion colonization and pathogenesis. *J Immunol.* 2007 Nov 1;179(9):6144-52. PubMed PMID: 17947689.
5. Singh A, Blank M, Shoenfeld Y, Illges H. Antiphospholipid syndrome patients display reduced titers of soluble CD21 in their sera irrespective of circulating anti-beta2-glycoprotein-I autoantibodies. *Rheumatol Int.* 2008 May;28(7):661-5. doi: 10.1007/s00296-007-0503-6. Epub 2008 Jan 3. PubMed PMID: 18172655.
6. Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
7. Faldyna M, Samankova P, Leva L, Cerny J, Oujezdska J, Rehakova Z, et al. Cross-reactive anti-human monoclonal antibodies as a tool for B-cell identification in dogs and pigs. *Vet Immunol Immunopathol.* 2007 Sep 15;119(1-2):56-62. Epub 2007 Jun 26. PubMed PMID: 17673300.
8. Filatov AV, Krotov GI, Zgoda VG, Volkov Y. Fluorescent immunoprecipitation analysis of cell surface proteins: a methodology compatible with mass-spectrometry. *J Immunol Methods.* 2007 Jan 30;319(1-2):21-33. Epub 2006 Oct 13. PubMed PMID: 17098248.

Pictures:

Double staining of human, canine and porcine B lymphocytes with anti-CD79a (HM57) and anti-CD21 (LT21) antibody

