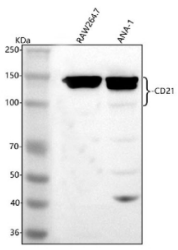
CD21 Antibody / Complement receptor type 2 (FY12216)

Catalog No.	Formulation	Size
FY12216	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P20023
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This CD21 antibody is available for research use only.



CR2 Antibody Macrophage Cell Line WB. Western blot analysis of Complement Receptor 2 / CD21 in mouse RAW264.7 and ANA-1 whole cell lysates using rabbit anti-CD21 antibody. A prominent band is detected at approximately 130â€“150 kDa in both lanes, consistent with glycosylated CD21, which migrates above its predicted molecular weight of approximately 110-120 kDa due to post-translational modification and isoform variation of this complement receptor.

Description

CD21 antibody detects Complement receptor type 2 (CR2), encoded by the CR2 gene on chromosome 1q32.2. CD21 antibody is widely used in immunology research to study complement regulation, B cell activation, and Epstein-Barr virus (EBV) infection. CD21 is a receptor for complement component C3d and is expressed on mature B cells, follicular dendritic cells, and some epithelial cells. It bridges innate and adaptive immunity by linking complement recognition with B cell receptor signaling.

Structurally, CD21 is a type I membrane glycoprotein of ~145 kDa composed of 15-16 short consensus repeat (SCR) domains in its extracellular region, a single transmembrane segment, and a cytoplasmic tail involved in signaling. The extracellular domains bind complement fragments C3d, C3dg, and iC3b, while also serving as receptors for EBV glycoprotein gp350/220. Alternative splicing generates isoforms with slightly different extracellular domain composition.

Functionally, CD21 lowers the threshold for B cell activation by binding complement-tagged antigens and co-ligating with the B cell receptor (BCR). This amplifies BCR signaling, enhances antigen uptake, and promotes humoral responses. CD21 also mediates EBV entry into B cells, as the virus exploits CD21 to establish infection. Researchers use CD21 antibody to study B cell biology, complement pathways, and viral pathogenesis.

Clinically, CD21 is implicated in autoimmunity, immunodeficiency, and cancer. Altered CD21 expression is observed in systemic lupus erythematosus and common variable immunodeficiency. As the EBV receptor, CD21 is essential for viral entry and persistence, linking it to EBV-associated malignancies including Burkitt lymphoma and nasopharyngeal carcinoma. Diagnostic use of CD21 antibody includes immunohistochemical staining of follicular dendritic cell networks and B cell subsets in tissue sections. NSJ Bioreagents offers CD21 antibody for use in immunology, virology, and pathology research.

Experimentally, CD21 antibody is applied in flow cytometry to identify B cell subsets, in immunohistochemistry to visualize follicular dendritic cell networks, and in western blotting to detect the ~145 kDa protein. Co-immunoprecipitation with CD21 antibody helps identify complement-binding partners and viral glycoprotein interactions.

For a validated reference of CD21 expression across B cells and follicular dendritic cell networks, see CD21 antibody clone CR2/2754 with supporting multi-application data.

Application Notes

Optimal dilution of the CD21 antibody should be determined by the researcher.

Immunogen

E.coli-derived human CD21/CR2 recombinant protein (Position: D76-N817) was used as the immunogen for the CD21 antibody.

Storage

After reconstitution, the CD21 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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