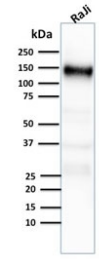
CD21 Antibody / Complement Receptor 2 CR2 Antibody [clone CR2/2754] (V3971)

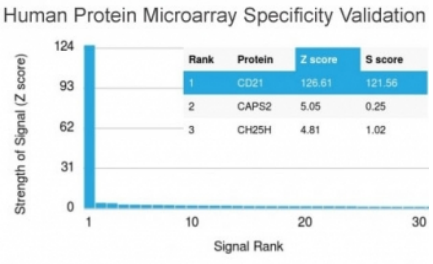
Catalog No.	Formulation	Size
V3971-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3971-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3971SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3971IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

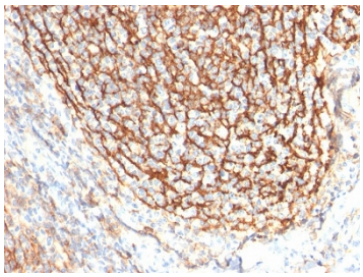
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CR2/2754
Purity	Protein G affinity chromatography
UniProt	P20023
Localization	Cell surface
Applications	ELISA (order BSA/sodium Azide-free Format For Coating) : Flow Cytometry : 1-2ug/million cells Western Blot : 1-2ug/ml Immunofluorescence : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CD21 Antibody / Complement Receptor 2 CR2 Antibody is available for research use only.



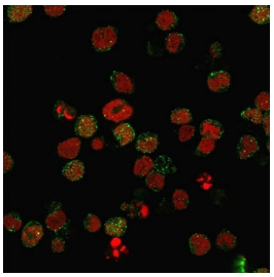
CD21 Antibody Raji WB. Western blot analysis of Complement Receptor 2 / CD21 in human Raji cell lysate using mouse monoclonal CD21 antibody, clone CR2/2754. A band is detected at approximately 140â€“160 kDa, consistent with the predicted molecular weight of glycosylated CD21, which migrates above its theoretical mass of approximately 105 kDa due to extensive post-translational glycosylation characteristic of this B-cell surface receptor.



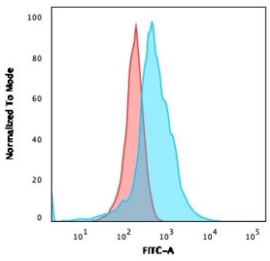
CD21 Antibody Microarray Validation. Protein microarray analysis of Complement Receptor 2 / CD21 using mouse monoclonal CD21 antibody, clone CR2/2754, across a HuProt(TM) array containing more than 19,000 full-length human proteins demonstrates highly selective binding to CD21 (CR2), with minimal reactivity toward non-target proteins. Signal intensity is strongly enriched for CD21 relative to all other proteins, supporting a high level of specificity. Z-score represents the strength of antibody binding signal expressed as standard deviations above the mean array signal, while S-score reflects the separation between the top-ranked target and the next highest signal, indicating relative target specificity. The observed signal profile confirms selective recognition of CD21 in a proteome-wide context.



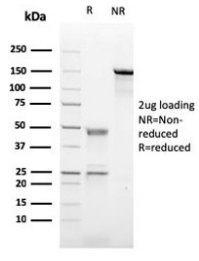
CD21 Antibody Tonsil IHC. Immunohistochemistry of Complement Receptor 2 / CD21 in FFPE human tonsil tissue using mouse monoclonal CD21 antibody, clone CR2/2754. HRP-DAB brown staining highlights a dense reticular follicular dendritic cell network within germinal centers, with accompanying membranous staining of B lymphocytes, consistent with CD21 localization in B-cell-rich regions, while nuclei are counterstained blue. Heat induced epitope retrieval was performed by boiling tissue sections in pH 6 10 mM citrate buffer for 10-20 min followed by cooling at RT prior to staining.



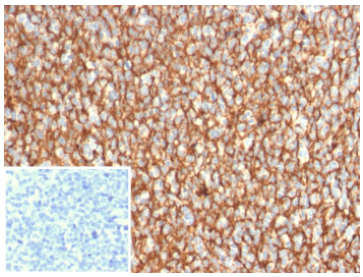
CD21 Antibody MOLT4 IF. Immunofluorescence analysis of Complement Receptor 2 / CD21 in PFA-fixed human MOLT4 cells using mouse monoclonal CD21 antibody, clone CR2/2754. Green fluorescence highlights CD21-positive cell surface and cytoplasmic signal, while nuclei are counterstained with Reddot (red).



CD21 Antibody MOLT4 FACS. Flow cytometry analysis of Complement Receptor 2 / CD21 in PFA-fixed human MOLT4 cells using CD21 antibody, clone CR2/2754. The blue histogram shows a clear rightward shift compared to the red isotype control, indicating detectable CD21 expression under the conditions tested.



SDS-PAGE analysis of purified, BSA-free CD21 antibody (clone CR2/2754) as confirmation of integrity and purity.



CD21 Antibody Germinal Center IHC. Immunohistochemistry of Complement Receptor 2 / CD21 in FFPE human tonsil tissue using mouse monoclonal CD21 antibody, clone CR2/2754. HRP-DAB brown staining highlights dense membranous labeling of B lymphocytes within germinal center regions, with an underlying reticular pattern corresponding to follicular dendritic cell networks, while nuclei are counterstained blue. Inset: PBS was used in place of primary antibody as a negative control to confirm specificity of staining. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling prior to staining.

Description

Complement receptor 2 (CR2), also known as CD21, is a cell surface glycoprotein that functions as a key component of the B-cell co-receptor complex and plays an important role in adaptive immune responses. CD21 Antibody / Complement Receptor 2 CR2 Antibody is widely used for the detection of CD21 across multiple applications, supporting studies of B-cell biology, germinal center dynamics, and complement-mediated immune processes. CD21 antibody, also referred to as CR2 antibody in the literature, is an essential tool for evaluating immune cell populations and lymphoid tissue organization.

CD21 is expressed predominantly on mature B cells and follicular dendritic cells, where it binds complement component fragments such as C3d. This interaction enhances B-cell receptor signaling and promotes antigen-specific activation. In addition to its immunological role, CD21 serves as the cellular receptor for Epstein-Barr virus (EBV), enabling viral entry into B cells and contributing to viral pathogenesis. These functions position CD21 as a central regulator of both normal immune responses and infection-related processes.

In immunohistochemistry and immunofluorescence, CD21 is typically observed in lymphoid tissues such as tonsil, lymph node, and spleen, where it highlights follicular dendritic cell networks and B-cell-rich regions. The staining pattern often appears as a reticular mesh within germinal centers, corresponding to the distribution of follicular dendritic cells, alongside membranous staining of B lymphocytes. This dual localization makes CD21 antibody particularly useful for assessing germinal center architecture and immune microenvironment organization.

Western blot analysis of CD21 typically reveals a band at approximately 140-150 kDa, consistent with the predicted molecular weight of the glycosylated full-length receptor. Detection in B-cell-derived cell lines such as Raji and Daudi further supports its expression profile in B lymphocytes. Flow cytometry applications enable quantitative analysis of CD21-positive cell populations, while immunofluorescence allows detailed visualization of subcellular localization and tissue architecture.

A defining feature of this antibody is its validation across multiple experimental platforms, including immunohistochemistry, immunofluorescence, western blot, and flow cytometry, combined with protein microarray specificity assessment. Microarray analysis across thousands of human proteins demonstrates selective binding to CD21, providing a high-confidence measure of specificity and minimizing the likelihood of cross-reactivity in complex biological samples.

The mouse monoclonal clone CR2/2754 antibody provides robust and consistent detection of CD21 across diverse applications. Its combination of broad assay validation, clean microarray-confirmed specificity, and reliable staining of lymphoid structures makes it well suited as a reference antibody for studies of B-cell biology, complement receptor function, and immune system organization.

This CD21 antibody is part of a broader CD antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the CD21 Antibody / Complement Receptor 2 CR2 Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A portion of amino acids 142-240 from the human protein was used as the immunogen for the CD21 antibody.

Storage

Store the CD21 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CR2 antibody, Complement receptor 2 antibody, CD21 protein antibody, Epstein-Barr virus receptor antibody, B-cell co-receptor antibody

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