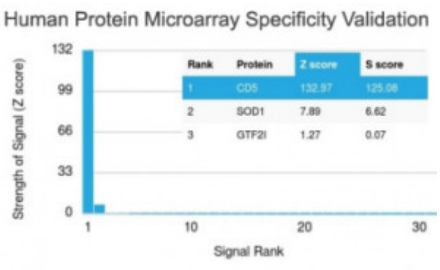
CD5 Antibody CD5/2416 / CD5 Monoclonal Antibody [clone CD5/2416] (V3961)

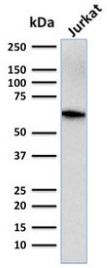
Catalog No.	Formulation	Size
V3961-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3961-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3961SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

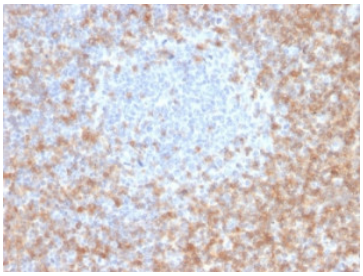
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	CD5/2416
Purity	Protein G affinity chromatography
UniProt	P06127
Localization	Cell surface
Applications	Flow cytometry: 1-2ug/10^6 cells Western blot: 1-2ug/ml Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This CD5 Antibody CD5/2416 / CD5 Monoclonal Antibody is available for research use only.



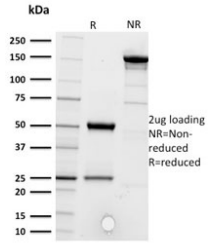
CD5 Antibody CD5/2416 HuProt Protein Microarray Specificity Validation. Protein microarray analysis of CD5 Monoclonal Antibody clone CD5/2416 using a HuProt array containing more than 19,000 human proteins. CD5 is identified as the highest-ranked target, with a reported Z-score of approximately 132.97 and an S-score of approximately 125.08. The large separation between CD5 and the next-ranked proteins supports selective recognition of the intended target under the microarray testing conditions.



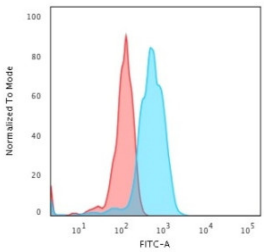
CD5 Antibody CD5/2416 WB Analysis of Human Jurkat Cells. Western blot analysis of human Jurkat whole-cell lysate using CD5 Monoclonal Antibody clone CD5/2416. A prominent band is detected at approximately 67 kDa, above the predicted molecular weight of approximately 55 kDa. The higher apparent molecular weight is consistent with the known glycosylation of CD5, a heavily glycosylated lymphocyte surface protein.



CD5 Antibody CD5/2416 IHC Staining of Human Tonsil Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human tonsil tissue using CD5 Monoclonal Antibody clone CD5/2416. Brown DAB staining is observed predominantly in lymphocyte-rich regions surrounding the germinal centers, consistent with the distribution of CD5-positive T cells. Heat-induced epitope retrieval was performed in 10 mM citrate buffer (pH 6) for 10-20 minutes, followed by cooling at room temperature before antibody incubation.



CD5 Antibody CD5/2416 SDS-PAGE Analysis of Purified Antibody. SDS-PAGE analysis of purified CD5 Monoclonal Antibody clone CD5/2416 under reducing (R) and non-reducing (NR) conditions. The reducing lane shows bands corresponding to antibody heavy and light chains, while the non-reducing lane shows a predominant higher-molecular-weight band consistent with intact IgG. Approximately 2 ug of purified antibody was loaded per condition to assess antibody integrity and purity.



CD5 Antibody CD5/2416 FACS Staining of Human Jurkat Cells. Flow cytometry analysis of human Jurkat cells using CD5 Monoclonal Antibody clone CD5/2416, followed by goat anti-mouse IgG-CF488. The antibody-stained population (blue) exhibits a clear rightward fluorescence shift relative to the isotype control (red), demonstrating antibody-associated fluorescence consistent with CD5 expression in Jurkat T cells.

Description

CD5 Antibody CD5/2416 / CD5 Monoclonal Antibody targets CD5, a type I transmembrane glycoprotein belonging to the scavenger receptor cysteine-rich (SRCR) superfamily. CD5 is predominantly expressed on T lymphocytes and selected B-cell populations, where it functions as both a surface marker and a regulator of antigen receptor signaling. Its extracellular region contains three SRCR domains, while its cytoplasmic tail participates in intracellular signaling interactions. CD5 contributes to immune homeostasis by influencing lymphocyte activation thresholds and modulating cellular responses to antigen recognition.

During T-cell development, CD5 expression is closely associated with the strength of signaling through the T-cell receptor (TCR). Developing thymocytes regulate CD5 expression in response to interactions between their TCRs and self-peptide-MHC complexes. Higher CD5 expression generally correlates with stronger self-reactivity, reflecting its role in regulating antigen receptor responsiveness. In mature T cells, CD5 participates in signaling networks that influence activation, proliferation, and survival. These functions help balance effective immune responses with mechanisms that limit excessive stimulation and maintain peripheral tolerance.

Although CD5 is widely recognized as a T-cell marker, it is also expressed by certain B-cell populations. CD5-positive B cells participate in specialized immune functions, including natural antibody production and regulation of inflammatory

responses. CD5 expression is particularly relevant in hematologic malignancies, where it serves as an important immunophenotypic marker. Chronic lymphocytic leukemia and mantle cell lymphoma commonly exhibit CD5 expression, although other lymphoid neoplasms may also express this protein. Its diagnostic significance therefore depends on interpretation alongside additional lineage-associated markers.

CD5 is extensively glycosylated, contributing to an apparent molecular weight greater than that predicted from its amino acid sequence. Glycosylation can influence protein folding, stability, and interactions at the cell surface. The extracellular SRCR domains participate in molecular recognition, while intracellular signaling interactions allow CD5 to influence lymphocyte responsiveness. These structural and functional properties connect CD5 expression with immune cell identity and regulation of adaptive immune responses.

CD5 Antibody CD5/2416 provides a means of investigating this lymphocyte-associated glycoprotein in studies of immune regulation and lymphoid malignancies. Its protein microarray specificity evaluation adds evidence of selective target recognition, complementing the biological importance of CD5 in T-cell development, B-cell function, and antigen receptor signaling.

A full range of CD5 antibody reagents for immunohistochemistry, western blot, and flow cytometry is available on our CD5 Antibody collection page.

Application Notes

The optimal dilution of the CD5 Antibody CD5/2416 / CD5 Monoclonal Antibody for each application should be determined by the researcher.

Immunogen

A portion of amino acids 269-366 from the human protein was used as the immunogen for this CD5 antibody.

Storage

Store the CD5 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CD5 clone CD5/2416 antibody, CD5 2416 antibody, CD5 protein microarray validated antibody, CD5 monoclonal antibody 2416, CD5 specificity antibody

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