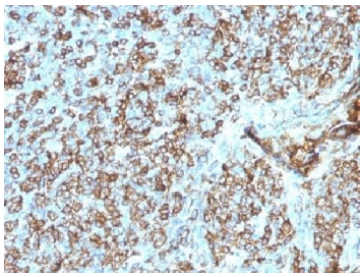
# HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody [clone CR3/43] (V3374)

| Catalog No. | Formulation | Size |
|---|---|---|
| V3374-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 100 ug |
| V3374-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 20 ug |
| V3374SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

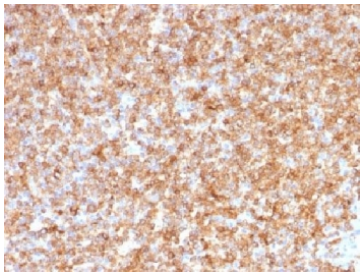
Citations (23)

**Bulk quote request**

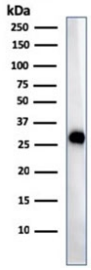
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG1, kappa |
| **Clone Name** | CR3/43 |
| **Purity** | Protein G affinity chromatography |
| **UniProt** | P04440, P01908, P01909, P01920, P01903 |
| **Localization** | Cytoplasmic and cell surface |
| **Applications** | ELISA : 2-4ug/ml for coating (order BSA/sodium azide-free format)<br>Flow Cytometry : 1-2ug/million cells<br>Immunofluorescence : 1-2ug/ml<br>Western Blot : 1-2ug/ml<br>Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT |
| **Limitations** | This HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody is available for research use only. |



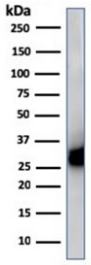
HLA-DP/DQ/DR Antibody CR3/43 in Human Tonsil IHC. Immunohistochemistry testing of HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody in FFPE human tonsil tissue. HIER was performed by boiling tissue sections in 10 mM citrate buffer, pH 6, for 10-20 min. Strong HLA class II immunoreactivity is observed in numerous cells throughout the lymphoid tissue, with prominent membrane-associated staining.



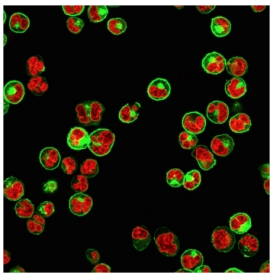
HLA-DP/DQ/DR Antibody CR3/43 in Human Tonsil Germinal Center IHC. Immunohistochemistry testing of HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody in FFPE human tonsil tissue. HIER was performed by boiling tissue sections in 10 mM citrate buffer, pH 6, for 10-20 min. Broad HLA class II staining is observed within the lymphoid tissue, including strong immunoreactivity in the germinal center and surrounding lymphocyte populations.



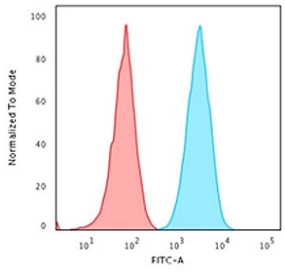

HLA-DP/DQ/DR Antibody CR3/43 in Human Ramos B Lymphoma Cells WB. Western blot testing of HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody with human Ramos B lymphoma cell lysate. A strong band is observed at approximately 27 kDa, consistent with detection of an HLA class II beta chain. The expected molecular weights are approximately 36 kDa for the alpha chain and 27 kDa for the beta chain.



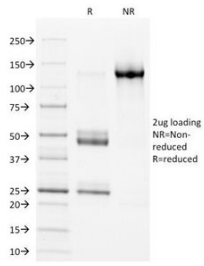

HLA-DP/DQ/DR Antibody CR3/43 in Human Spleen WB. Western blot testing of HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody with human spleen lysate. Two prominent bands are observed at approximately 36 kDa and 27 kDa, consistent with the expected molecular weights of HLA class II alpha and beta chains, respectively.



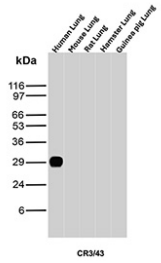
HLA-DP/DQ/DR Antibody CR3/43 in Human Raji B Lymphoma Cells IF. Immunofluorescence staining of human Raji B lymphoma cells with HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody (green) and RedDot nuclear stain (red). Strong HLA class II immunoreactivity is observed predominantly along the cell periphery, producing distinct membrane-associated staining around the Raji cells.



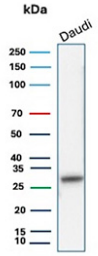

HLA-DP/DQ/DR Antibody CR3/43 in Human Raji B Lymphoma Cells FACS. Flow cytometry testing of human Raji B lymphoma cells with HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody at 1 ug/million cells following blocking with goat serum. The antibody-stained population (blue) shows a strong fluorescence shift relative to the isotype control (red), demonstrating robust detection of cell-surface HLA class II molecules.




Purified HLA-DP/DQ/DR Antibody CR3/43 SDS-PAGE. Electrophoretic analysis of purified, BSA-free HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody under reducing (R) and non-reducing (NR) conditions using a 2 ug antibody load. Reduction produces the expected immunoglobulin heavy and light chain components near ~50 and ~25 kDa, while the non-reduced antibody migrates predominantly near ~150 kDa, supporting the integrity and purity of the antibody preparation.




HLA-DP/DQ/DR Antibody CR3/43 in Human, Mouse, Rat and Rabbit Lung WB. Western blot testing of HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody with human, mouse, rat and rabbit lung tissue lysates. A prominent band at approximately 27 kDa is detected in human lung, while little to no corresponding signal is observed in the mouse, rat or rabbit samples, supporting preferential recognition of the human HLA class II target.




HLA-DP/DQ/DR Antibody CR3/43 in Human Daudi B Lymphoma Cells WB. Western blot testing of HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody with human Daudi B lymphoma cell lysate. A prominent band is observed at approximately 30 kDa, consistent with detection of an HLA class II chain.

## Description

HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody recognizes a shared determinant expressed by the classical human MHC class II molecules HLA-DP, HLA-DQ and HLA-DR. These cell-surface glycoproteins are central components of adaptive immunity and function primarily by presenting peptides derived from extracellular proteins to CD4-positive T lymphocytes. Recognition of peptide-MHC class II complexes by T cell receptors contributes to helper T cell activation and the coordination of antigen-specific cellular and humoral immune responses.

HLA-DP, HLA-DQ and HLA-DR are heterodimeric proteins composed of non-covalently associated alpha and beta chains. Their extracellular domains combine to form an open-ended peptide-binding groove capable of accommodating processed antigenic peptides. During MHC class II antigen processing, newly synthesized molecules are directed to endosomal compartments where peptide loading occurs. Stable peptide-MHC class II complexes are subsequently transported to the plasma membrane for recognition by CD4-positive T cells.

MHC class II molecules are constitutively expressed by professional antigen-presenting cells, including B lymphocytes, dendritic cells and macrophages. Expression can also be induced or increased in additional cell types in response to inflammatory signaling, particularly interferon gamma. Regulation of HLA class II expression therefore influences antigen presentation and communication between antigen-presenting cells and helper T lymphocytes. Altered MHC class II expression has been investigated in infectious disease, autoimmunity, transplantation, inflammatory disorders, hematologic malignancies and cancer immunology.

A pan-HLA class II reagent capable of detecting HLA-DP, HLA-DQ and HLA-DR provides a broader view of MHC class II expression than antibodies directed against an individual HLA locus. This can be useful when the research objective is detection or characterization of the overall HLA class II-positive cell population rather than discrimination among individual DP, DQ or DR molecules. Because HLA-DP, HLA-DQ and HLA-DR differ in their genetics, expression and peptide-binding characteristics, locus-specific antibodies remain complementary tools when more precise characterization is required.

Clone CR3/43 is a mouse monoclonal antibody characterized as recognizing a shared epitope on HLA-DP, HLA-DQ and HLA-DR MHC class II molecules. NSJ Bioreagents provides this HLA-DP/DQ/DR Antibody for research into MHC class II expression, antigen presentation and adaptive immune recognition. An MHC Class II Antibody with broad HLA-DP/DQ/DR reactivity can support studies of HLA class II biology and CD4 T cell-mediated immune responses.

Explore our Immunology Antibodies page for additional reagents targeting MHC molecules, antigen presentation and adaptive immune responses.

## Application Notes

Optimal dilution of the HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody should be determined by the researcher.

## Immunogen

Human tonsil cells were used as the immunogen for the HLA-DP/DQ/DR antibody. The HLA-DP/DQ/DR Antibody CR3/43 reacts with a common epitope of human major histocompatibility (MHC) class II antigens, HLA-DP, -DQ and -DR.

## Storage

Store the HLA-DP/DQ/DR Antibody CR3/43 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

## Alternate Names

HLA-DP/DQ/DR antibody, MHC Class II antibody, Pan-HLA Class II antibody, HLA Class II antibody, HLA-DP/DQ/DR MHC II antibody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