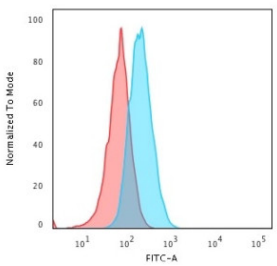
HLA-DQ Antibody SPM422 / HLA Class II DQ Antibody [clone SPM422] (V2582)

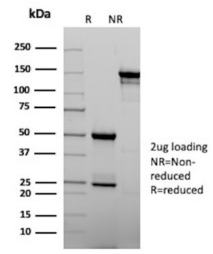
Catalog No.	Formulation	Size
V2582-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2582-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2582SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	SPM422
Purity	Protein G affinity chromatography
UniProt	P01908, P01909, P01920
Localization	Cell surface
Applications	ELISA (order BSA/sodium azide-free format for coating) Flow cytometry: 0.5-1ug/10^6 cells Immunofluorescence: 0.5-1ug/ml
Limitations	This HLA-DQ Antibody SPM422 / HLA Class II DQ Antibody is available for research use only.



HLA-DQ Antibody SPM422 in Human Raji B Lymphoma Cells FACS. Flow cytometry testing of human Raji B lymphoma cells with HLA-DQ Antibody SPM422 / HLA Class II DQ Antibody followed by goat anti-mouse IgG-CF488 (blue). The isotype control is shown in red. The SPM422-stained population shows a clear fluorescence shift relative to the isotype control, demonstrating detection of cell-surface HLA-DQ.



Purified HLA-DQ Antibody SPM422 SDS-PAGE. Electrophoretic analysis of purified HLA-DQ Antibody SPM422 / HLA Class II DQ Antibody under reducing (R) and non-reducing (NR) conditions using a 2 ug antibody load. The non-reduced antibody migrates predominantly near ~140-150 kDa, while reduction produces prominent immunoglobulin heavy and light chain components near ~50 kDa and ~25 kDa, respectively, supporting the integrity and purity of the antibody preparation.

Description

HLA-DQ Antibody SPM422 / HLA Class II DQ Antibody recognizes human HLA-DQ, a classical major histocompatibility complex (MHC) class II molecule involved in antigen presentation to CD4-positive T lymphocytes. HLA-DQ displays processed antigenic peptides at the cell surface, allowing peptide-MHC complexes to be surveyed by T cell receptors. Recognition of an appropriate complex contributes to helper T cell activation and the coordination of antigen-specific immune responses.

HLA-DQ is a heterodimer consisting of non-covalently associated alpha and beta chains, principally encoded by HLA-DQA1 and HLA-DQB1. Both chains contribute to formation of the extracellular peptide-binding groove and contain polymorphic residues that influence peptide-binding specificity. Extensive genetic variation within the HLA-DQ system produces considerable diversity in antigen presentation among individuals and contributes to associations between particular HLA-DQ variants and susceptibility to immune-mediated diseases.

HLA-DQ is expressed predominantly by professional antigen-presenting cells, including B lymphocytes, dendritic cells and macrophages. Proteins internalized by these cells can be processed within endosomal compartments, allowing resulting peptides to associate with MHC class II molecules. Peptide-loaded HLA-DQ complexes are subsequently displayed at the plasma membrane for recognition by CD4-positive T cells. HLA-DQ expression may also be influenced by cellular activation and inflammatory signaling.

An HLA-DQ Antibody provides locus-focused detection within the broader MHC class II system and complements antibodies targeting HLA-DP, HLA-DR or shared pan-HLA class II determinants. HLA-DQ is studied extensively in immunogenetics because polymorphism within its alpha and beta chains can influence peptide presentation and immune recognition. These properties make HLA-DQ relevant to research involving autoimmunity, transplantation, infectious disease, inflammation and adaptive immune regulation.

Clone SPM422 is a mouse monoclonal antibody generated using the T4-positive cytotoxic T lymphocyte clone HG-38 as the immunogen and is characterized for recognition of human HLA-DQ. NSJ Bioreagents provides this HLA-DQ Antibody for research into MHC class II expression, antigen presentation and immune-cell recognition. An HLA Class II DQ Antibody can support investigation of HLA-DQ-positive cell populations and mechanisms connecting peptide presentation with CD4 T cell-mediated immunity.

For additional information on HLA-DQ biology and complementary antibody validation, visit our HLA-DQ Antibody SPV-L3 / MHC Class II Antibody page.

Application Notes

Optimal dilution of the HLA-DQ Antibody SPM422 / HLA Class II DQ Antibody should be determined by the researcher.

1. No special pretreatment is required for IHC staining.

Immunogen

The T4-positive CTL clone HG-38 was used as the immunogen for the HLA-DQ Antibody SPM422.

Storage

Store the HLA-DQ Antibody SPM422 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

HLA-DQ antibody, HLA Class II DQ antibody, MHC Class II antibody, HLA-DQ MHC II antibody, SPM422 antibody

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