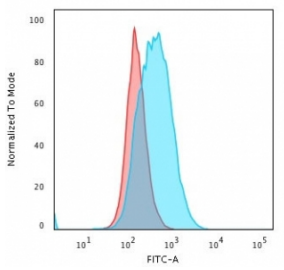
HLA-DP Antibody SPM421 / HLA Class II DP Antibody [clone SPM421] (V2579)

Catalog No.	Formulation	Size
V2579-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2579-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2579SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (2)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	SPM421
Purity	Protein G affinity chromatography
UniProt	P04440
Localization	Cell surface
Applications	ELISA (order BSA/sodium Azide-free Format For Coating) : Flow Cytometry : 1-2ug/10^6 cells
Limitations	This HLA-DP Antibody SPM421 / HLA Class II DP Antibody is available for research use only.



HLA-DP Antibody SPM421 in Human Raji B Lymphoma Cells FACS. Flow cytometry testing of human Raji B lymphoma cells with HLA-DP Antibody SPM421 / HLA Class II DP Antibody. The antibody-stained population (blue) shows a strong fluorescence shift relative to the isotype control (red), demonstrating robust detection of cell-surface HLA-DP.

Description

HLA-DP Antibody SPM421 / HLA Class II DP Antibody recognizes a non-polymorphic determinant of HLA-DP, a member of the major histocompatibility complex class II family. HLA-DP molecules participate in adaptive immunity by presenting processed antigenic peptides to CD4-positive T lymphocytes. Recognition of peptide-HLA-DP complexes by T cell receptors contributes to antigen-specific lymphocyte activation and helps coordinate cellular and humoral immune responses.

HLA-DP is a heterodimeric cell-surface glycoprotein composed of an alpha chain encoded by HLA-DPA1 and a beta chain encoded by HLA-DPB1. The alpha and beta chains associate non-covalently, with their extracellular domains forming the peptide-binding groove characteristic of MHC class II molecules. Peptides generated through endosomal processing can be loaded into this groove before peptide-HLA-DP complexes are transported to the cell surface for recognition by CD4-positive T cells.

HLA-DP belongs to the classical MHC class II group together with HLA-DR and HLA-DQ. Genetic polymorphism within HLA-DP contributes to variation in peptide-binding preferences and antigen-specific immune responses among individuals. HLA-DP expression and genetic variation have been investigated in transplantation, infectious disease, autoimmune and inflammatory conditions, cancer immunology and other areas involving adaptive immune recognition.

Expression of HLA-DP and other MHC class II molecules is associated with antigen-presenting cells and can vary according to cellular differentiation and immune activation. Differences in MHC class II expression among normal and malignant lymphoid populations have therefore been investigated as features of immune-cell development and lymphoproliferative disease. HLA-DP analysis can also contribute to studies examining the regulation of antigen presentation and communication between antigen-presenting cells and helper T lymphocytes.

Clone SPM421 is a mouse monoclonal antibody generated using the human REH6 acute lymphoblastic leukemia cell line and is characterized as recognizing a non-polymorphic determinant of DP-MHC class II. NSJ Bioreagents provides this HLA-DP Antibody for research into HLA-DP expression, antigen presentation and immune-cell biology. An HLA Class II DP Antibody can support investigation of MHC class II-mediated peptide presentation and CD4 T cell immune responses.

For additional information on HLA-DP biology and complementary antibody validation, visit our HLA-DP Antibody HLA-DPB1/2862R / MHC Class II DP Antibody page.

Application Notes

Optimal dilution of the HLA-DP Antibody SPM421 / HLA Class II DP Antibody should be determined by the researcher.

Immunogen

Non-T, non-B human acute lymphoblastic leukemia REH6 cell line was used as the immunogen for the HLA-DP Antibody SPM421.

Storage

Store the HLA-DP Antibody SPM421 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

HLA-DP antibody, HLA Class II DP antibody, HLA-DPB1 antibody, MHC Class II DP antibody, HLA-DP beta antibody

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