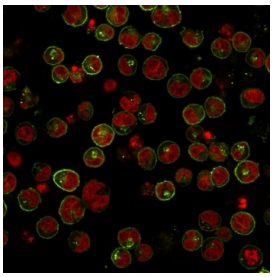
HLA-DRB Antibody for IF SPM289 / HLA-DRB Immunofluorescence Antibody [clone SPM289] (V2587)

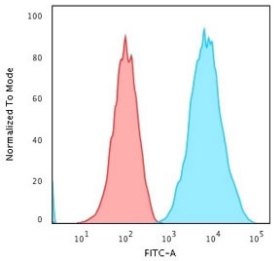
Catalog No.	Formulation	Size
V2587-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2587-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2587SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2587IHC-7ML	Prediluted 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

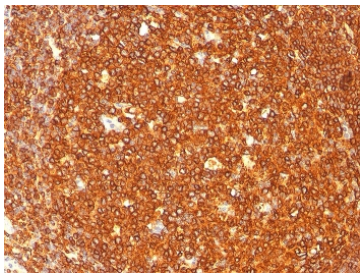
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	SPM289
Purity	Protein G affinity chromatography
UniProt	P01911
Localization	Cell surface
Applications	Flow Cytometry: 1-2ug/million cells in 0.1ml Immunofluorescence: 2-4ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Prediluted IHC only format: incubate for 30 min at RT (1)
Limitations	This HLA-DRB antibody is available for research use only.



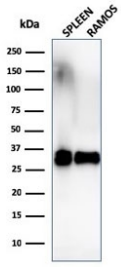
HLA-DRB Antibody for IF SPM289 immunofluorescence analysis of human cells. Immunofluorescent staining of human Raji cells using HLA-DRB Antibody for IF clone SPM289 reveals strong membranous and peripheral cell surface fluorescence consistent with expression of the HLA-DR beta chain / HLA-DRB on antigen-presenting B lymphocytes. Cells were labeled with the mouse monoclonal antibody followed by a fluorescent secondary antibody producing green signal, while nuclei are counterstained with Reddot (red). The staining pattern highlights the characteristic plasma membrane localization of MHC class II HLA-DR molecules involved in peptide antigen presentation.



Flow cytometry testing of human Raji cells with HLA-DRB antibody (clone SPM289); Red=isotype control, Blue= HLA-DRB antibody.



IHC staining of FFPE human tonsil with HLA-DRB antibody SPM289. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



Western blot testing of human spleen and Ramos lysate with HLA-DRB antibody (clone SPM289). Predicted molecular weight ~30 kDa.

Description

Major histocompatibility complex class II DR beta 1 (HLA-DRB1) is a transmembrane glycoprotein encoded by the HLA-DRB1 gene and forms the beta chain of the HLA-DR antigen receptor responsible for peptide antigen presentation to CD4-positive T lymphocytes. HLA-DRB Antibody for IF enables visualization of the HLA-DR beta chain in cells using immunofluorescence microscopy, allowing researchers to examine the distribution and cellular localization of major histocompatibility complex class II molecules within antigen-presenting immune cells.

The HLA-DR receptor is a heterodimeric complex composed of an alpha chain encoded by HLA-DRA paired with a beta chain encoded by HLA-DRB genes. This receptor binds peptides derived from extracellular proteins that have been processed within endosomal compartments and transports these peptide antigens to the cell surface for presentation to CD4-positive helper T lymphocytes. Through this mechanism, the HLA-DR complex plays a central role in adaptive immune responses and immune surveillance. Because of this function, HLA-DR expression is characteristic of professional antigen-presenting cells including B lymphocytes, macrophages, and dendritic cells.

HLA-DRB1 represents the primary beta chain gene of the HLA-DR complex and is highly polymorphic across human populations. Numerous HLA-DRB1 allelic variants contribute to diversity in peptide binding and antigen recognition, influencing immune responses and susceptibility to autoimmune diseases. Detection of HLA-DR beta chain expression is

therefore widely used in immunology research to study antigen-presenting cell populations and immune activation pathways.

Immunofluorescence analysis provides a powerful method for visualizing HLA-DRB1 expression and distribution within individual cells. Fluorescent antibody labeling allows detection of the HLA-DR beta chain at the plasma membrane and within intracellular compartments associated with antigen processing and presentation. Antibodies such as mouse monoclonal clone SPM289 support immunofluorescence studies examining localization of MHC class II molecules, cellular immune activation, and antigen presentation dynamics in cultured cells and experimental systems.

For additional information on HLA-DRB biology and complementary antibody validation, visit our HLA-DRB Antibody rHLA-DRB/7198 / HLA-DR Beta Chain Antibody page.

Application Notes

Optimal dilution of the HLA-DRB Antibody for IF SPM289 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

Activated human peripheral blood mononuclear cells were used as the immunogen for the HLA-DRB antibody.

Storage

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

Alternate Names

HLA-DR beta antibody, HLA-DRB1 antibody, MHC class II DR beta antibody, HLA class II histocompatibility antigen DR beta antibody

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