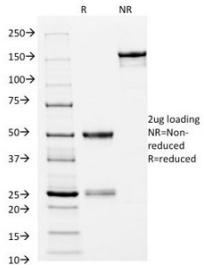
HLA-DR Antibody L243 / MHC Class II Antibody [clone L243] (V2591)

Catalog No.	Formulation	Size
V2591-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2591-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2591SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (11)

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	L243
Purity	Protein G affinity chromatography
UniProt	P01911
Localization	Cell surface
Applications	Flow cytometry: 0.5-1ug/10^6 cells Immunofluorescence: 0.5-1ug/ml
Limitations	This HLA-DR Antibody L243 / MHC Class II Antibody is available for research use only.



Purified HLA-DR Antibody L243 SDS-PAGE. Electrophoretic analysis of 2 ug of purified, BSA-free HLA-DR Antibody clone L243 under reducing (R) and non-reducing (NR) conditions. Under reducing conditions, the antibody resolves into bands at approximately 50 kDa and 25 kDa, corresponding to the immunoglobulin heavy and light chains, respectively. Under non-reducing conditions, the intact antibody migrates at approximately 150 kDa, supporting the integrity and purity of the purified L243 monoclonal antibody.

Description

HLA-DR Antibody L243 / MHC Class II Antibody recognizes HLA-DR, a major histocompatibility complex (MHC) class II molecule that plays a central role in antigen presentation and adaptive immunity. HLA-DR is a heterodimeric cell-surface glycoprotein composed of an alpha chain encoded by HLA-DRA and a beta chain encoded by an HLA-DRB gene. Together, these chains form a peptide-binding complex that presents extracellularly derived antigens to CD4-positive T cells. Recognition of peptide-loaded HLA-DR by the T cell receptor helps initiate and regulate antigen-specific immune responses.

HLA-DR is constitutively expressed by professional antigen-presenting cells, including B cells, monocytes, macrophages and dendritic cells. Its expression can also be induced on additional cell types during immune activation and inflammatory signaling. Because HLA-DR expression reflects antigen-presenting capacity and immune activation, the molecule is extensively studied in immunology, infectious disease, autoimmunity, transplantation and cancer. Changes in HLA-DR expression can influence interactions between antigen-presenting cells and CD4-positive T cells and are frequently investigated in studies of immune regulation and tumor-immune interactions.

Clone L243 is a well-established and extensively published monoclonal antibody against HLA-DR. Rather than functioning as a simple HLA-DR beta-chain-specific reagent, L243 recognizes a conformational epitope associated with properly folded HLA-DR alpha/beta heterodimers. Recognition therefore depends on the structural organization of the HLA-DR complex. L243 has also been reported to inhibit mixed lymphocyte reactions, reflecting its interaction with a functionally important HLA-DR surface determinant. Its extensive use in published research has made L243 one of the best-known antibody clones for investigating HLA-DR expression and MHC class II biology.

NSJ Bioreagents provides clone L243 as an HLA-DR Antibody for research involving antigen-presenting cells, immune activation and HLA class II biology. HLA-DR-mediated peptide presentation is fundamental to communication between antigen-presenting cells and helper T cells and contributes to both protective immunity and immune dysregulation. An MHC Class II Antibody targeting HLA-DR can therefore support research into antigen presentation, immune-cell phenotyping and mechanisms controlling adaptive immune responses.

For additional information on HLA-DR biology and complementary antibody validation, visit our HLA-DR Antibody LN3 / MHC Class II Antibody page.

Application Notes

Optimal dilution of the HLA-DR Antibody L243 / MHC Class II Antibody should be determined by the researcher.

Immunogen

Activated human peripheral blood mononuclear cells were used as the immunogen for the HLA-DR Antibody L243.

Storage

Store the HLA-DR Antibody L243 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

HLA-DR antibody, MHC Class II antibody, L243 antibody, HLA-DR antigen antibody, Human Leukocyte Antigen DR antibody

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