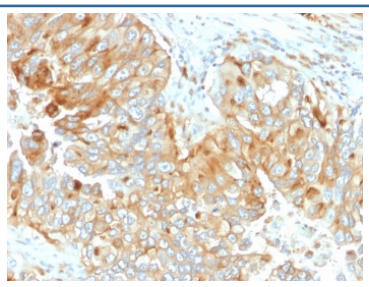
HLA-DRB1 Antibody Clone DA2 / HLA-DRB1 Monoclonal Antibody [clone DA2] (V7845)

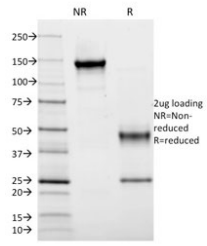
Catalog No.	Formulation	Size
V7845-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7845-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7845SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	DA2
Purity	Protein G affinity chromatography
UniProt	P01911
Applications	Flow Cytometry : 1-2ug/10^6 cells Immunofluorescence : 1-2ug/ml Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This HLA-DRB1 antibody is available for research use only.



HLA-DRB1 Antibody Clone DA2 immunohistochemistry analysis of human tissue. IHC staining of formalin-fixed, paraffin-embedded human endometrium using HLA-DRB1 Antibody Clone DA2 demonstrates HRP-DAB brown membranous and cytoplasmic staining in antigen-presenting immune cells within the tissue microenvironment. Clone DA2 highlights HLA-DR beta chain / HLA-DRB1 expression in immune cell populations consistent with MHC class II antigen-presenting cells. Tissue sections were subjected to heat-induced epitope retrieval by boiling in pH 9 10 mM Tris with 1 mM EDTA for 10-20 min followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free HLA-DRB1 antibody clone DA2 as confirmation of integrity and purity.

Description

Major histocompatibility complex class II DR beta 1 (HLA-DRB1) is a transmembrane glycoprotein encoded by the HLA-DRB1 gene that forms the beta chain of the HLA-DR antigen receptor responsible for presenting processed peptide antigens to CD4-positive helper T lymphocytes. HLA-DRB1 Antibody Clone DA2 recognizes the HLA-DR beta chain and has been widely described in the literature as Clone DA2, a mouse monoclonal antibody frequently used to investigate major histocompatibility complex class II expression and antigen presentation in immune cells. The HLA-DR receptor is a heterodimeric complex composed of an alpha chain encoded by HLA-DRA paired with a polymorphic beta chain encoded by HLA-DRB genes, most prominently HLA-DRB1. Together these chains form a peptide-binding receptor that displays extracellularly derived antigens on the cell surface for recognition by CD4-positive helper T lymphocytes, a process essential for activation of adaptive immune responses.

Expression of HLA-DR molecules is characteristic of professional antigen-presenting cells including B lymphocytes, macrophages, dendritic cells, and activated monocytes. Because of this expression pattern, HLA-DRB1 antibodies are widely used in immunology research to identify antigen-presenting immune cell populations and evaluate immune activation states within tissues and cultured cells. Clone DA2 has been reported in numerous peer-reviewed studies examining the distribution and function of MHC class II molecules on immune cells. In these studies, HLA-DRB1 Antibody Clone DA2 has been used to characterize antigen-presenting cell populations and to study regulation of immune responses mediated through the HLA-DR pathway.

The HLA-DRB1 gene exhibits extensive allelic diversity across human populations, contributing to variability in peptide binding specificity and immune responsiveness. Numerous HLA-DRB1 variants influence susceptibility to autoimmune diseases and immune-mediated disorders including rheumatoid arthritis, multiple sclerosis, and type 1 diabetes. Because HLA-DRB1 plays a central role in antigen presentation and immune regulation, antibodies such as HLA-DRB1 Antibody Clone DA2 are widely used in immunology research examining antigen presentation pathways, immune activation, and immune cell function.

Application Notes

Optimal dilution of the HLA-DRB1 Antibody Clone DA2 should be determined by the researcher.

Immunogen

Activated human peripheral blood mononuclear cells were used as the immunogen for the HLA-DRB1 antibody.

Storage

Store the HLA-DRB1 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