HLA-DRB1 Antibody for IHC / HLA-DRB1 Immunohistochemistry Antibody [clone MSVA-478R] (V6085)

Catalog No.	Formulation	Size
V6085-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6085-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-478R
UniProt	P01911
Localization	Cell membrane
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This HLA-DRB1 Antibody for IHC / HLA-DRB1 Immunohistochemistry Antibody is available for research use only.



HLA-DRB1 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of HLA-DR beta chain / HLA-DRB1 in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using rabbit monoclonal antibody clone MSVA-478R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong membranous localization in antigen-presenting immune cells, including B lymphocytes, dendritic cells, and macrophages. Prominent staining is observed in lymphoid tissues such as tonsil, lymph node, and spleen, while most epithelial and stromal cell populations remain largely negative. Within tumor tissue microarrays, positive staining highlights infiltrating immune cell populations within the tumor microenvironment. Evaluation across large TMA panels enables direct comparison of HLA-DRB1 expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported expression profiles in the Human Protein Atlas and support its role in MHC class II antigen presentation.

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 complex. HLA-DRB1 Antibody for IHC is used to visualize the distribution of this antigen-presenting molecule within formalin-fixed, paraffin-embedded tissues by immunohistochemistry, enabling evaluation of immune cell populations and tissue immune activity directly within histologic sections.

The HLA-DR complex is a heterodimer composed of an invariant alpha chain encoded by HLA-DRA and a polymorphic beta chain encoded primarily by HLA-DRB1. Together these proteins assemble into a cell surface receptor responsible for presenting processed peptide antigens to CD4-positive helper T lymphocytes. This antigen presentation pathway is central to adaptive immune activation, coordinating interactions between antigen-presenting cells and T lymphocytes. As a result, expression of HLA-DR molecules is characteristic of professional antigen-presenting cells including B lymphocytes, macrophages, dendritic cells, and activated monocytes.

Immunohistochemistry analysis of HLA-DRB1 provides valuable insight into immune cell distribution within tissues. In lymphoid organs such as tonsil, lymph node, and spleen, strong membranous staining is typically observed in B-cell zones, interfollicular antigen-presenting cells, and dendritic cell populations. Macrophages and other antigen-presenting cells within inflammatory infiltrates may also demonstrate prominent HLA-DR expression. This staining pattern allows pathologists and researchers to identify immune cell populations and evaluate immune responses within normal tissues, inflammatory lesions, and tumor microenvironments.

HLA-DRB1 is highly polymorphic, with numerous allelic variants contributing to diversity in peptide binding and immune recognition across human populations. Variation in HLA-DRB1 has been associated with susceptibility to autoimmune diseases, transplant compatibility, and immune response variability. Because of these biological roles, antibodies targeting HLA-DRB1 are widely used in tissue-based immunohistochemistry studies examining immune infiltration, antigen-presenting cell localization, and immune activation in research and diagnostic settings.

A recombinant rabbit monoclonal antibody such as clone MSVA-478R enables consistent immunohistochemical detection of HLA-DR beta chain expression in tissue sections. The resulting staining typically highlights membranous and cytoplasmic patterns in antigen-presenting immune cells within lymphoid tissues and immune infiltrates, supporting morphological assessment of immune cell distribution in histologic specimens.

For additional information on HLA-DRB1 biology and complementary antibody validation, visit our HLA-DRB1 Antibody HLA-DRB/1067 / HLA-DR Beta Chain Antibody page.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the HLA-DRB1 Antibody for IHC / HLA-DRB1 Immunohistochemistry Antibody should be determined by the researcher.

2. This HLA-DRB1/Major histocompatibility complex class II DR beta 1 chain antibody is recombinantly produced by expression in CHO cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant full-length human HLA-DRB1 protein was used as the immunogen for the HLA-DRB1/Major

histocompatibility complex class II DR beta 1 chain antibody.

Storage

HLA-DRB1/Major histocompatibility complex class II DR beta 1 chain antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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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