HLA-DRA Antibody for IHC / HLA-DR alpha immunohistochemistry Antibody [clone MSVA-470R] (V6084)

Catalog No.	Formulation	Size
V6084-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6084-20UG	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-470R
UniProt	P01903
Localization	Cell membrane
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This HLA-DRA Antibody for IHC / HLA-DR alpha immunohistochemistry Antibody is available for research use only.

HLA-DRA Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Human leukocyte antigen DR alpha / HLA-DRA in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal antibody clone MSVA-470R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates predominant membranous and cytoplasmic localization in antigen-presenting immune cells, including lymphocytes, macrophages, and dendritic cells across multiple tissues, while most non-immune cell populations show minimal to absent staining. Within tumor tissue microarrays, positive staining highlights infiltrating immune cells within the tumor microenvironment. Evaluation across large TMA panels enables direct comparison of HLA-DRA expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported HLA-DR alpha expression profiles in the Human Protein Atlas and support its role in MHC class II antigen presentation.

Description

Human leukocyte antigen DR alpha (HLA-DRA) is a major histocompatibility complex class II protein encoded by the HLA-DRA gene and forms the alpha chain of the HLA-DR antigen complex involved in antigen presentation. This molecule pairs with the HLA-DR beta chain to form a heterodimeric receptor that presents processed peptide antigens to CD4-positive T lymphocytes, playing a critical role in adaptive immune responses. HLA-DRA is therefore a central component of the MHC class II antigen presentation pathway and is highly expressed in professional antigen-presenting cells including B lymphocytes, dendritic cells, macrophages, and certain activated epithelial and immune cells.

HLA-DRA Antibody Recombinant Rabbit MAb for IHC is used to detect expression of the HLA-DR alpha chain in formalin-fixed, paraffin-embedded tissues using immunohistochemistry. In normal tissues, HLA-DR alpha expression is typically observed in antigen-presenting cells within lymphoid organs and inflammatory microenvironments. Immunohistochemical staining often reveals membranous and cytoplasmic signal in B cells, macrophages, dendritic cells, and other immune cell populations involved in antigen processing and presentation. Detection of HLA-DRA by immunohistochemistry therefore provides valuable information about immune activation, antigen presentation, and inflammatory responses within tissue samples.

The HLA-DR antigen is widely used as a marker of immune activation and antigen-presenting cell identity in both normal and diseased tissues. Because the HLA-DR complex consists of alpha and beta chains encoded by separate genes, antibodies targeting the alpha chain such as HLA-DRA antibody reagents allow specific evaluation of this component of the MHC class II receptor. Expression of HLA-DR alpha is tightly regulated and can be induced by cytokines such as interferon-gamma during immune responses. As a result, HLA-DRA expression frequently increases in inflammatory conditions, infection, autoimmune disease, and tumor microenvironments where immune cell infiltration occurs.

In diagnostic and research pathology, HLA-DRA antibody staining is frequently used to evaluate immune cell populations and antigen presentation activity within tissues. The HLA-DR alpha chain is commonly detected in lymphoid tissues, sites of inflammation, and tumors with significant immune infiltration. Because HLA-DR expression reflects activation of antigen-presenting pathways, immunohistochemical analysis of HLA-DRA can help characterize immune microenvironments and assess interactions between immune cells and tumor cells. Clone MSVA-470R is a recombinant rabbit monoclonal antibody designed to recognize HLA-DRA and supports detection of the HLA-DR alpha chain in immunohistochemical staining applications.

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-DRA Antibody for IHC / HLA-DR alpha immunohistochemistry Antibody should be determined by the researcher.

2. This HLA-DRA/Major histocompatibility complex class II DR alpha chain antibody is recombinantly produced by expression in human HEK293 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

A recombinant fragment (around amino acids 1-200) of human HLA-DR protein (exact sequence is proprietary) was used as the immunogen for the HLA-DRA/Major histocompatibility complex class II DR alpha chain antibody.

Storage

HLA-DRA/Major histocompatibility complex class II DR alpha chain antibody with sodium azide - store at 2 to 8oC;

antibody without sodium azide - store at -20 to -80oC.

Alternate Names

HLA-DR alpha antibody, HLA-DR antibody, MHC class II DR alpha antibody, HLA-DR antigen alpha chain antibody