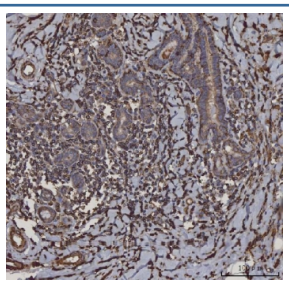
HLA-DRA Antibody for WB / HLA-DR alpha western blot antibody [clone 8I10H1] (RQ7130)

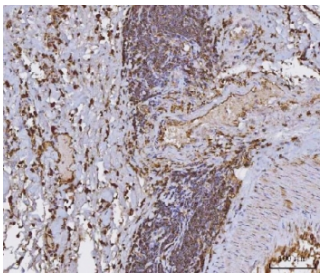
Catalog No.	Formulation	Size
RQ7130	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

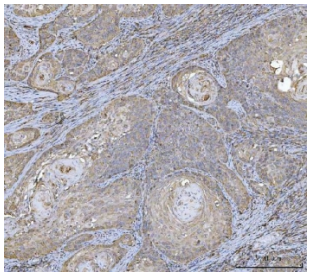
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	8I10H1
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P01903
Localization	Cytoplasm, cell membrane
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This HLA-DRA antibody is available for research use only.



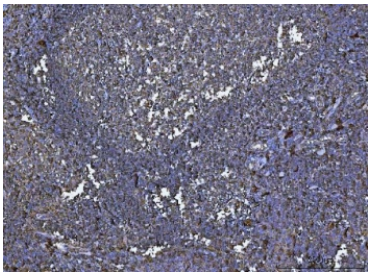
IHC staining of FFPE human infiltrating breast cancer tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



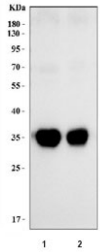
IHC staining of FFPE human rectal cancer tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



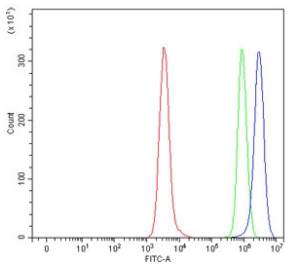
IHC staining of FFPE human laryngeal squamous cell carcinoma tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human tonsil tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot analysis using HLA-DRA Antibody for WB in human lymphoma cell lines. HLA-DRA Antibody for WB (mouse monoclonal, clone 8I10H1) was used to analyze human cell lysates by western blot. Lane 1: human Raji lysate, Lane 2: human Daudi lysate. A band is detected at approximately 35 kDa, consistent with the predicted molecular weight of Human leukocyte antigen DR alpha / HLA-DRA, the alpha chain of the HLA-DR major histocompatibility complex class II receptor involved in antigen presentation to CD4-positive T lymphocytes.



Flow cytometry testing of human Daudi cells with HLA-DRA antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= HLA-DRA antibody.

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 receptor involved in peptide antigen presentation to CD4-positive T lymphocytes. HLA-DRA Antibody for WB enables detection of this MHC class II protein by western blot, supporting analysis of HLA-DR alpha expression in immune cell populations and experimental systems studying antigen presentation pathways.

The HLA-DR antigen complex consists of an alpha chain encoded by HLA-DRA and a beta chain encoded by HLA-DRB genes. Together these chains form a heterodimeric receptor located on the cell surface of antigen-presenting cells, where

it binds peptides generated from extracellular proteins processed within endosomal compartments. Once loaded with antigenic peptides, the HLA-DR complex presents these peptides to CD4-positive helper T cells, initiating adaptive immune responses. Because of this role in immune activation, expression of HLA-DR alpha is primarily associated with professional antigen-presenting cells including B lymphocytes, macrophages, dendritic cells, and certain activated epithelial and immune cells.

HLA-DRA antibody reagents detect the alpha chain of the HLA-DR antigen, which is also referred to as HLA-DR alpha or the MHC class II DR alpha chain in immunology literature. Expression of this molecule is tightly regulated and can be strongly induced by inflammatory cytokines such as interferon-gamma. As a result, elevated HLA-DR alpha levels are frequently observed during immune activation, inflammatory disease, infection, and within tumor microenvironments characterized by immune cell infiltration. Because MHC class II proteins are key mediators of immune surveillance, analysis of HLA-DRA expression can provide insight into immune activation and antigen presentation activity in both normal and pathological conditions.

Western blot analysis of HLA-DRA expression allows researchers to evaluate the presence and relative abundance of the HLA-DR alpha chain in cell lysates and experimental samples. This approach is commonly used to confirm expression of MHC class II proteins in immune cell lines, lymphoid tissues, and experimental models investigating immune regulation. Clone 8I10H1 is a mouse monoclonal antibody that recognizes HLA-DRA and supports detection of the HLA-DR alpha chain in western blot experiments designed to analyze antigen presentation pathways and immune-related signaling processes.

Application Notes

Optimal dilution of the HLA-DRA antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids I26-L254) was used as the immunogen for the HLA-DRA antibody.

Storage

After reconstitution, the HLA-DRA antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

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