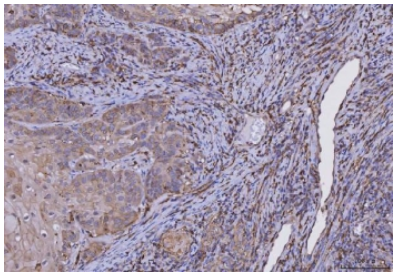
HLA-DRA Antibody for FACS 5B13F7 [clone 5B13F7] (RQ7131)

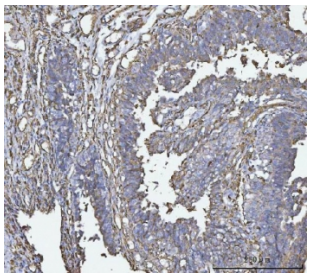
Catalog No.	Formulation	Size
RQ7131	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

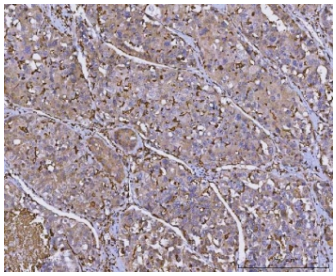
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b
Clone Name	5B13F7
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P01903
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This HLA-DRA antibody is available for research use only.



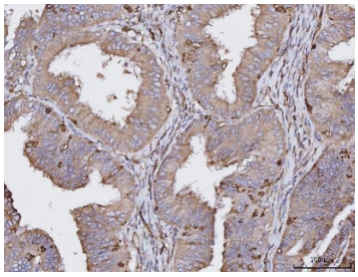
IHC staining of FFPE human laryngeal squamous cell carcinoma tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



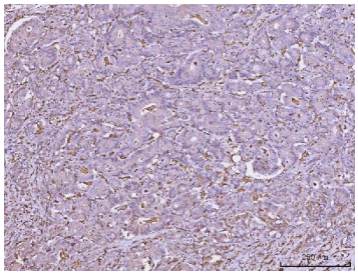
IHC staining of FFPE human bladder epithelial carcinoma tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



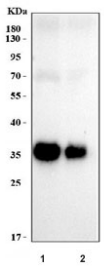
IHC staining of FFPE human hepatocellular carcinoma tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



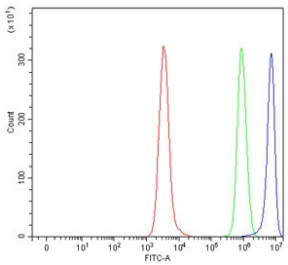
IHC staining of FFPE human endometrial cancer tissue with HLA-DRA antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



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



Western blot testing of human 1) Raji and 2) Daudi cell lysate with HLA-DRA antibody. Expected molecular weight ~35 kDa.



HLA-DRA Antibody for FACS testing of human Daudi cells by flow cytometry. Mouse monoclonal HLA-DRA antibody (clone 5B13F7) was used at 1 ug per million cells after blocking with goat serum. Red histogram shows cells alone, green represents isotype control staining, and blue indicates HLA-DRA antibody staining. A clear rightward shift indicates expression of Human leukocyte antigen DR alpha / HLA-DRA on Daudi B lymphoblastoid cells.

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 responsible for antigen presentation to CD4-positive T lymphocytes. HLA-DRA Antibody for FACS enables detection of this immune marker on individual cells by flow cytometry, allowing identification and analysis of antigen-presenting cell populations such as B lymphocytes, macrophages, and dendritic cells.

HLA-DRA forms a heterodimer with the HLA-DR beta chain to create the HLA-DR antigen complex, a key component of the MHC class II antigen presentation pathway. This receptor binds peptides derived from extracellular proteins that have been processed within endosomal compartments and displays them at the cell surface for recognition by helper T cells. Through this mechanism, the HLA-DR alpha chain plays an essential role in immune surveillance and adaptive immune activation. Because antigen-presenting cells coordinate immune responses, HLA-DRA expression is commonly associated with professional antigen-presenting cells including dendritic cells, macrophages, and activated B 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 HLA-DR alpha is tightly regulated by immune signaling pathways and can be strongly induced by inflammatory cytokines such as interferon-gamma. As a result, elevated HLA-DR expression is frequently observed in activated immune cells during infection, autoimmune responses, and inflammatory disease. Increased HLA-DR alpha expression can also occur in tumor microenvironments where immune infiltration and antigen presentation are active components of anti-tumor immunity.

Flow cytometry analysis of HLA-DRA expression provides a powerful approach for evaluating immune cell subsets and monitoring immune activation states within heterogeneous cell populations. Because flow cytometry measures fluorescence signals on a cell-by-cell basis, HLA-DRA antibodies are widely used to characterize antigen-presenting cells, assess immune activation, and study immune regulation in experimental systems. Detection of the HLA-DR alpha chain by flow cytometry is particularly valuable when analyzing blood leukocytes, cultured immune cells, or lymphoma-derived cell lines that naturally express high levels of MHC class II molecules. Clone 5B13F7 is a mouse monoclonal antibody that recognizes HLA-DRA and supports detection of the HLA-DR alpha chain in flow cytometry experiments designed to analyze immune cell populations and antigen presentation pathways.

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