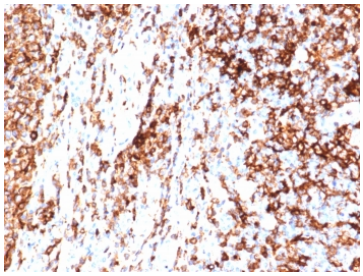
HLA-DR Antibody Rabbit Monoclonal HLA-DRA/6840R [clone HLA-DRA/6840R] (V5130)

Catalog No.	Formulation	Size
V5130-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5130-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5130SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

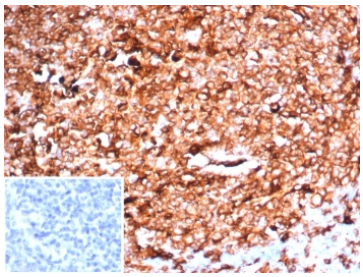
Recombinant RABBIT MONOCLONAL

Bulk quote request

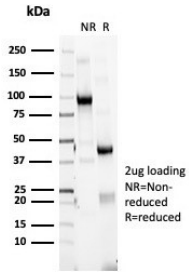
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	HLA-DRA/6840R
Purity	Protein A/G affinity
UniProt	P01903
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This HLA-DR antibody is available for research use only.



HLA-DR Antibody Rabbit Monoclonal HLA-DRA/6840R immunohistochemistry staining of human tonsil tissue. IHC analysis of FFPE human tonsil demonstrates HRP-DAB brown staining of numerous lymphoid cells using rabbit monoclonal HLA-DR antibody clone HLA-DRA/6840R. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling before staining. The staining pattern highlights membranous and cytoplasmic signal in immune cells consistent with expression of Human leukocyte antigen DR alpha / HLA-DRA on antigen-presenting cells including B lymphocytes and other leukocytes within tonsillar lymphoid tissue.



IHC staining of FFPE human tonsil tissue with HLA-DR antibody (clone HLA-DRA/6840R). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free HLA-DR (HLA-DRA/6840R) as confirmation of integrity and purity.

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 presenting peptide antigens to CD4-positive T lymphocytes. HLA-DR Antibody Rabbit Monoclonal HLA-DRA/6840R recognizes the HLA-DR antigen complex, a widely used immunologic marker of major histocompatibility complex class II expression on antigen-presenting immune cells including B lymphocytes, macrophages, and dendritic cells.

HLA-DR is a heterodimeric receptor composed of an alpha chain encoded by HLA-DRA paired with a beta chain encoded by HLA-DRB genes. These two chains associate to form the HLA-DR antigen complex, which binds peptides derived from extracellular proteins that have been processed within endosomal compartments. The peptide-loaded HLA-DR complex is transported to the cell surface where it presents antigenic peptides to CD4-positive helper T lymphocytes, initiating adaptive immune responses. Because of this function in antigen presentation, expression of HLA-DR alpha is strongly associated with professional antigen-presenting cells and activated immune populations.

In immunology literature the HLA-DR receptor complex is frequently referred to simply as HLA-DR, and antibodies directed against this molecule are often described as HLA-DR antibodies, HLA-DR alpha antibodies, or MHC class II DR antibodies. HLA-DR antibody reagents therefore detect the HLA-DR antigen complex present on immune cells and infiltrating leukocytes in tissues. Expression of HLA-DR alpha can be strongly induced by inflammatory cytokines such as interferon-gamma, resulting in increased MHC class II expression during immune activation, infection, autoimmune disease, and inflammatory responses.

Detection of HLA-DR expression using antibodies such as rabbit monoclonal clone HLA-DRA/6840R supports research examining antigen presentation pathways, immune activation, and immune cell characterization. Because HLA-DR expression reflects the presence and activation state of antigen-presenting immune cells, analysis of the HLA-DR alpha chain is widely used in immunology, pathology, and cancer research to study immune infiltration and MHC class II mediated antigen presentation.

Application Notes

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

Immunogen

A recombinant partial protein sequence (within amino acids 1-200) from the human protein was used as the immunogen for the HLA-DR antibody.

Storage

Aliquot the HLA-DR antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

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