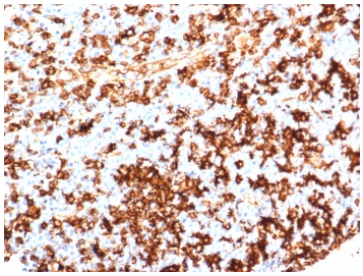
HLA-DR Antibody Recombinant Rabbit MAb HLA-DRA/6839R [clone HLA-DRA/6839R] (V5126)

Catalog No.	Formulation	Size
V5126-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5126-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5126SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

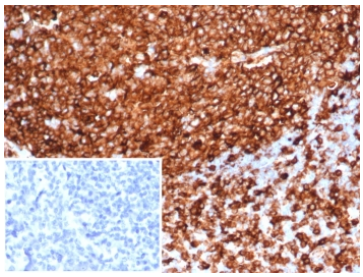
Recombinant RABBIT MONOCLONAL

Bulk quote request

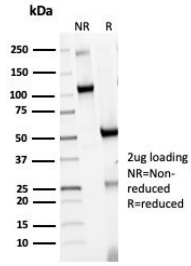
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	HLA-DRA/6839R
Purity	Protein A/G affinity
UniProt	P01903
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This HLA-DR antibody is available for research use only.



HLA-DR Antibody Recombinant Rabbit MAb HLA-DRA/6839R immunohistochemistry staining of human tonsil tissue. IHC analysis of FFPE human tonsil was performed using recombinant rabbit monoclonal HLA-DR antibody clone HLA-DRA/6839R following heat induced epitope retrieval by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allowing sections to cool before testing. HRP-DAB brown staining highlights HLA-DR positive immune cells within tonsillar lymphoid tissue, consistent with expression of Human leukocyte antigen DR alpha / HLA-DRA on antigen-presenting cells including B lymphocytes and other immune cells.



HLA-DR Antibody Recombinant Rabbit MAb HLA-DRA/6839R immunohistochemistry staining of human tonsil tissue. IHC analysis of FFPE human tonsil demonstrates strong HRP-DAB brown staining of numerous lymphoid cells using recombinant rabbit monoclonal HLA-DR antibody clone HLA-DRA/6839R. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling prior to staining. The membranous and cytoplasmic staining pattern highlights HLA-DR expressing immune cells within tonsillar lymphoid follicles, consistent with expression of Human leukocyte antigen DR alpha / HLA-DRA in antigen-presenting B lymphocytes and other immune cell populations. Inset shows PBS used in place of primary antibody as a negative control.



SDS-PAGE analysis of purified, BSA-free HLA-DR (HLA-DRA/6839R) 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 involved in peptide antigen presentation to CD4-positive T lymphocytes. HLA-DR Antibody Recombinant Rabbit MAb HLA-DRA/6839R recognizes the HLA-DR antigen complex, a widely used marker of major histocompatibility complex class II expression on antigen-presenting immune cells such as B lymphocytes, macrophages, and dendritic cells.

HLA-DR is a heterodimeric receptor composed of an alpha chain encoded by HLA-DRA and a beta chain encoded by HLA-DRB genes. Together these two chains form the HLA-DR antigen complex that binds peptides derived from extracellular proteins 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. Through this antigen presentation pathway, the HLA-DR receptor plays a central role in adaptive immune activation and immune surveillance.

In immunology literature the HLA-DR receptor complex is often referred to simply as HLA-DR, and antibodies directed against this molecule are commonly 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 expressed on professional antigen-presenting cells and immune infiltrates present 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 recombinant rabbit monoclonal clone HLA-DRA/6839R supports studies of immune activation, antigen presentation pathways, and immune cell characterization in both normal and disease contexts. 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 evaluate immune infiltration and antigen presentation activity.

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