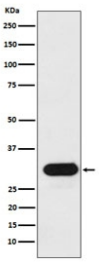
HLA-DRB1 Antibody Rabbit Monoclonal AFGA-8 / HLA-DRB1 Rabbit Monoclonal Antibody [clone AFGA-8] (RQ4989)

Catalog No.	Formulation	Size
RQ4989	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AFGA-8
Purity	Affinity purified
UniProt	P01911
Applications	Western Blot : 1:500-1:2000
Limitations	This HLA-DRB1 antibody is available for research use only.



HLA-DRB1 Antibody Rabbit Monoclonal AFGA-8 western blot analysis of human samples. Western blot testing was performed using HLA-DRB1 Antibody Rabbit Monoclonal AFGA-8. Lane 1: human Ramos cell lysate. A band is detected at approximately 30 kDa, consistent with the predicted molecular weight of the HLA-DR beta chain / HLA-DRB1. The banding pattern aligns with expression of MHC class II molecules in B lymphocyte-derived Ramos cells, which are known to express HLA-DR as part of their antigen-presenting immune function.

Description

Major histocompatibility complex class II DR beta 1 (HLA-DRB1) is a transmembrane glycoprotein encoded by the HLA-DRB1 gene that forms the beta chain of the HLA-DR antigen receptor responsible for presenting processed peptide antigens to CD4-positive helper T lymphocytes. HLA-DRB1 Antibody Rabbit Monoclonal AFGA-8 recognizes the HLA-DR beta chain and supports investigation of antigen-presenting immune cells that express this major histocompatibility complex class II molecule. HLA-DR is a heterodimeric receptor composed of an alpha chain encoded by HLA-DRA paired

with a polymorphic beta chain encoded by HLA-DRB genes, most prominently HLA-DRB1. Together these chains assemble into a peptide-binding receptor that displays processed extracellular antigens on the cell surface for recognition by CD4-positive T lymphocytes, initiating adaptive immune responses and coordinating immune activation.

Expression of HLA-DR molecules is characteristic of professional antigen-presenting cells including B lymphocytes, macrophages, dendritic cells, and activated monocytes. These immune cell populations rely on MHC class II molecules to present antigenic peptides to T lymphocytes and thereby regulate immune recognition and immune response development. Because of this biological role, antibodies targeting HLA-DRB1 are widely used in immunology research to identify antigen-presenting cell populations and evaluate immune activation within tissues and cell culture systems.

The HLA-DRB1 gene is highly polymorphic and exhibits extensive allelic diversity among human populations. This genetic variability influences peptide binding specificity and contributes to variation in immune recognition and disease susceptibility. Certain HLA-DRB1 variants have been associated with autoimmune diseases and immune-mediated disorders including rheumatoid arthritis, multiple sclerosis, and type 1 diabetes. As a result, antibodies recognizing HLA-DRB1 are valuable research tools for studying antigen presentation pathways, immune regulation, and immune cell function.

A rabbit monoclonal antibody such as clone AFGA-8 enables consistent detection of HLA-DR beta chain expression in research applications examining immune cell biology and antigen presentation. Detection of HLA-DRB1 expression helps characterize antigen-presenting cell populations and supports investigation of immune responses in normal physiology and disease-related immune processes.

Application Notes

Optimal dilution of the HLA-DRB1 Antibody Rabbit Monoclonal AFGA-8 should be determined by the researcher.

Immunogen

A synthetic peptide specific to human HLA-DRB1 was used as the immunogen for the HLA-DRB1 antibody.

Storage

Store the HLA-DRB1 antibody at -20oC.

Alternate Names

HLA-DR beta antibody, HLA-DRB1 antibody, MHC class II DR beta antibody, HLA class II histocompatibility antigen DR beta antibody