

# Anti-MHC Class II HLA-DPB1 Rabbit Monoclonal Antibody

**Catalog # ABO14132** 

## **Specification**

## Anti-MHC Class II HLA-DPB1 Rabbit Monoclonal Antibody - Product Information

Application WB, IHC, IF, ICC, IP

Primary Accession
Host
Rabbit
Isotype
Reactivity
Clonality
Format
Rabbit IgG
Human
Monoclonal
Liquid

**Description** 

Anti-MHC Class II HLA-DPB1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human.

# Anti-MHC Class II HLA-DPB1 Rabbit Monoclonal Antibody - Additional Information

**Gene ID 3115** 

#### **Other Names**

HLA class II histocompatibility antigen, DP beta 1 chain, HLA class II histocompatibility antigen, DP(W4) beta chain, MHC class II antigen DPB1, HLA-DPB1, HLA-DP1B

Calculated MW 29159 MW KDa

### **Application Details**

WB 1:1000-1:5000<br/>lHC 1:100-1:500<br/>lCC/IF 1:50-1:200<br/>lP 1:50

# **Subcellular Localization**

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Golgi apparatus, trans-Golgi network membrane; Single-pass type I membrane protein. Endosome membrane; Single- pass type I membrane protein. Lysosome membrane; Single-pass type I membrane protein. The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation.

#### **Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

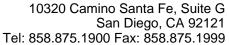
#### **Immunogen**

A synthesized peptide derived from human MHC Class II

#### **Purification**

Affinity-chromatography

Storage Store at -20°C for one year. For short term





storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

# Anti-MHC Class II HLA-DPB1 Rabbit Monoclonal Antibody - Protein Information

Name HLA-DPB1

Synonyms HLA-DP1B

#### **Function**

Binds peptides derived from antigens that access the endocytic route of antigen presenting cells (APC) and presents them on the cell surface for recognition by the CD4 T-cells. The peptide binding cleft accommodates peptides of 10-30 residues. The peptides presented by MHC class II molecules are generated mostly by degradation of proteins that access the endocytic route, where they are processed by lysosomal proteases and other hydrolases. Exogenous antigens that have been endocytosed by the APC are thus readily available for presentation via MHC II molecules, and for this reason this antigen presentation pathway is usually referred to as exogenous. As membrane proteins on their way to degradation in lysosomes as part of their normal turn-over are also contained in the endosomal/lysosomal compartments, exogenous antigens must compete with those derived from endogenous components. Autophagy is also a source of endogenous peptides, autophagosomes constitutively fuse with MHC class II loading compartments. In addition to APCs, other cells of the gastrointestinal tract, such as epithelial cells, express MHC class II molecules and CD74 and act as APCs, which is an unusual trait of the GI tract. To produce a MHC class II molecule that presents an antigen, three MHC class II molecules (heterodimers of an alpha and a beta chain) associate with a CD74 trimer in the ER to form a heterononamer. Soon after the entry of this complex into the endosomal/lysosomal system where antigen processing occurs, CD74 undergoes a sequential degradation by various proteases, including CTSS and CTSL, leaving a small fragment termed CLIP (class-II-associated invariant chain peptide). The removal of CLIP is facilitated by HLA-DM via direct binding to the alpha-beta-CLIP complex so that CLIP is released. HLA-DM stabilizes MHC class II molecules until primary high affinity antigenic peptides are bound. The MHC II molecule bound to a peptide is then transported to the cell membrane surface. In B-cells, the interaction between HLA-DM and MHC class II molecules is regulated by HLA-DO. Primary dendritic cells (DCs) also to express HLA-DO. Lysosomal microenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading.

#### **Cellular Location**

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Golgi apparatus, trans-Golgi network membrane; Single-pass type I membrane protein. Endosome membrane; Single-pass type I membrane protein. Lysosome membrane; Single-pass type I membrane protein Note=The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation

## Anti-MHC Class II HLA-DPB1 Rabbit Monoclonal Antibody - Protocols

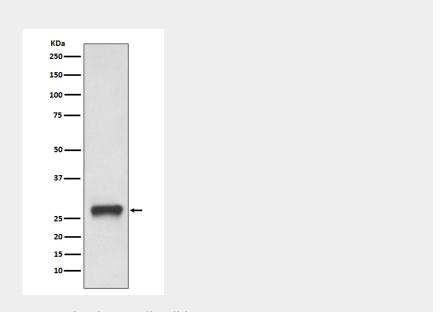
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence



- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

# Anti-MHC Class II HLA-DPB1 Rabbit Monoclonal Antibody - Images



Western blot analysis of MHC Class II expression in Daudi cell lysate.