abcam

Product datasheet

Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free ab246351

Recombinant RabMAb

6 Images

Overview

Product name	Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free
Description	Rabbit monoclonal [SP229] to HLA-DPB1 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, Flow Cyt (Intra), IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human tonsil tissue; Flow Cyt (intra): Ramos cells; ICC: Ramos cells.
General notes	ab246351 is the carrier-free version of **ab227676**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. **This product is FOR RESEARCH USE ONLY. For commercial use, please contact partnerships@abcam.com.**

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A/G purified
Purification notes	Purified from TCS by Protein A/G.
Clonality	Monoclonal
Clone number	SP229
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab246351 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 29 kDa.
Flow Cyt (Intra)		Use at an assay dependent concentration. Primary antibody incubation for 10 minutes at 4oC
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Primary antibody incubation for 10 minutes at room temperature.

Target

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.

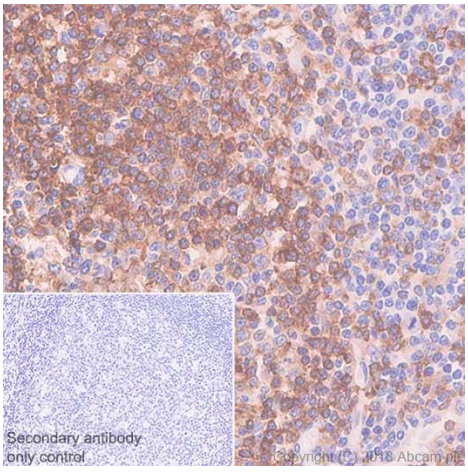
Sequence similarities

Belongs to the MHC class II family.
Contains 1 Ig-like C1-type (immunoglobulin-like) domain.

Cellular localization

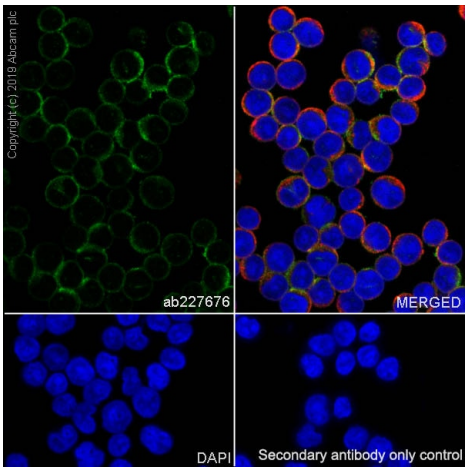
Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus, trans-Golgi network membrane. Endosome membrane. Lysosome membrane. The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free (ab246351)

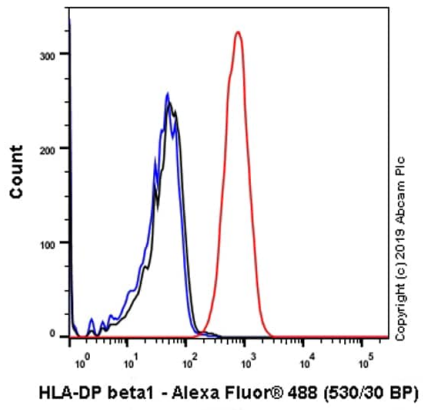
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human tonsil tissue sections labeling HLA-DPB1 with **ab227676** at 1/100 dilution (1.10 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab227676**)



Immunocytochemistry/ Immunofluorescence - Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free (ab246351)

Immunocytochemistry/ Immunofluorescence analysis of Ramos (human Burkitt's lymphoma B lymphocyte) cells labeling HLA-DPB1 with purified **ab227676** at 1/10 (10 µg/ml). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

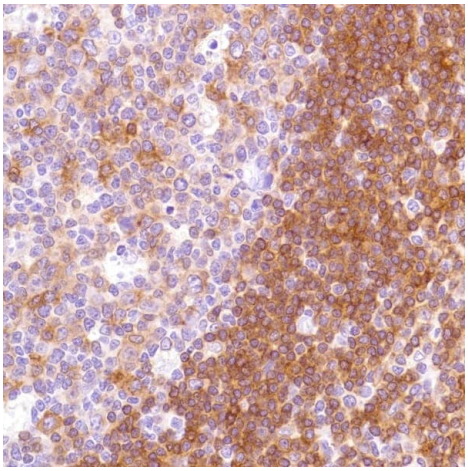
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab227676**).



Flow Cytometry (Intracellular) - Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free (ab246351)

Intracellular Flow Cytometry analysis of Ramos (Human Burkitt's lymphoma B lymphocyte) cells labeling HLA-DPB1 with purified **ab227676** at 1/20 dilution (5.5µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150081**) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (**ab172730**) / Black. Unlabeled control - Unlabelled cells / blue.

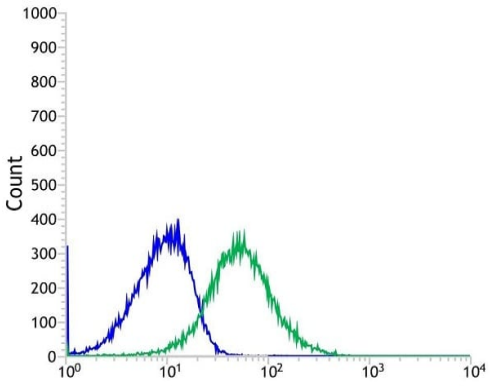
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab227676**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free (ab246351)

Formalin-fixed, paraffin-embedded human tonsil tissue stained for HLA-DPB1 using **ab227676** at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (**ab227676**).



Flow Cytometry (Intracellular) - Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free (ab246351)

Intracellular flow cytometric analysis ofRamos (human Burkitt's lymphoma cell line) cell line labeling HLA-DPB1 with **ab227676** at 1/400 dilution (green) compared with a negative control of rabbit IgG (blue).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA and sodium azide (**ab227676**).

Anti-HLA-DPB1 antibody [SP229] - BSA and Azide free (ab246351)

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