abcam

Product datasheet

Anti-HLA-DPB1 antibody [EPR23947-1] - BSA and Azide free ab278084

Recombinant RabMAb

1 Abreviews 6 Images

Overview

Product name	Anti-HLA-DPB1 antibody [EPR23947-1] - BSA and Azide free
Description	Rabbit monoclonal [EPR23947-1] to HLA-DPB1 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB **Unsuitable for:** Flow Cyt,ICC/IF or IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Daudi whole cell lysate; Human tonsil and spleen tissue lysates; HEK-293T transfected with HLA-DPB1 expression vector containing a myc-His-tag®, whole cell lysate. IHC-P: Human tonsil, liver and epityphlon tissue.
General notes	ab278084 is the carrier-free version of **ab259802**. 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**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit

monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	Constituent: 100% PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR23947-1
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab278084 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
IHC-P	★★★★☆ **(1)**	Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Detects a band of approximately 29 kDa (predicted molecular weight: 29 kDa).

Application notes Is unsuitable for Flow Cyt,ICC/IF or IP.

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.

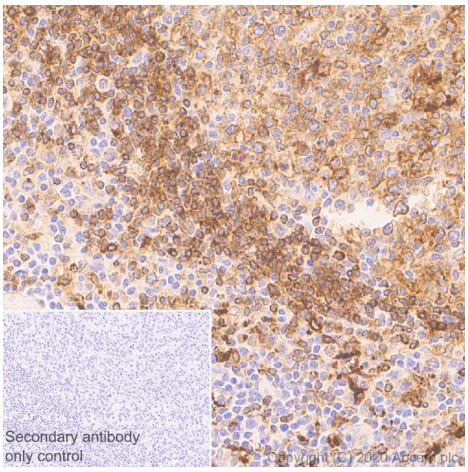
Sequence similarities

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



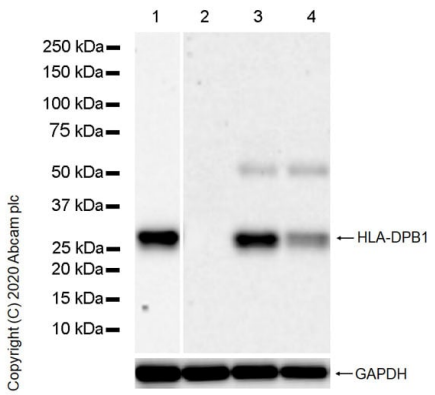
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR23947-1] - BSA and Azide free (ab278084)

This data was developed using **ab259802**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling HLA-DPB1 with **ab259802** at 1/2000 (0.286 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on human tonsil. The section was incubated with **ab259802** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond® Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Western blot - Anti-HLA-DPB1 antibody [EPR23947-1] - BSA and Azide free (ab278084)

All lanes : Anti-HLA-DPB1 antibody [EPR23947-1] (**ab259802**) at 1/1000 dilution

Lane 1 : Daudi (Human Burkitt's lymphoma lymphoblast), whole cell lysate
Lane 2 : HeLa (human cervix adenocarcinoma epithelial cell), whole cell lysate
Lane 3 : Human tonsil tissue lysate
Lane 4 : Human spleen tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) at 1/100000 dilution

Predicted band size: 29 kDa
Observed band size: 29 kDa

This data was developed using **ab259802**, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

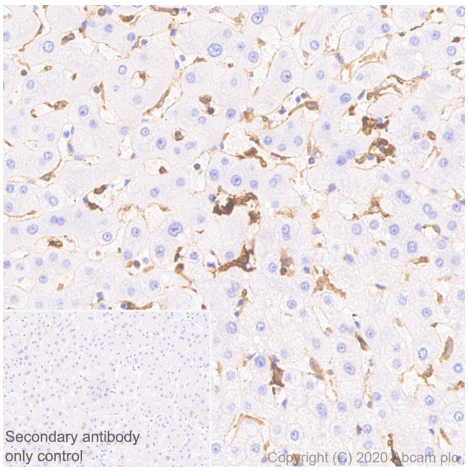
Negative control: HeLa.

The expression profile/molecular weight observed is consistent with what has been described in the literature. Band detected around 54 kDa could be the dimeric form (PMID: 20959457).

This blot was developed using a higher sensitivity ECL substrate.

Exposure times: Lane 1: 81 seconds.

Lane 2-4: 3 minutes.



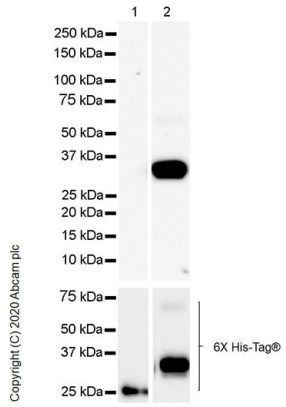
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR23947-1] - BSA and Azide free (ab278084)

This data was developed using **ab259802**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling HLA-DPB1 with **ab259802** at 1/2000 (0.286 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on Kupffer cells in human liver. The section was incubated with **ab259802** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond® Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Western blot - Anti-HLA-DPB1 antibody [EPR23947-1] - BSA and Azide free (ab278084)

All lanes : Anti-HLA-DPB1 antibody [EPR23947-1] (**ab259802**) at 1/1000 dilution

Lane 1 : His-tagged human HLA class II histocompatibility antigen, DRB1 beta chain recombinant protein, 35 ng
Lane 2 : HEK-293T transfected with HLA-DPB1 expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

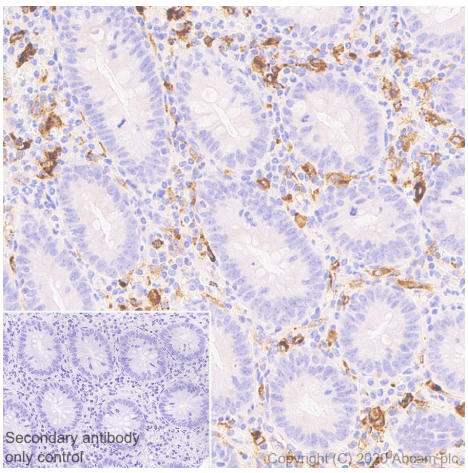
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 29 kDa

This data was developed using **ab259802**, the same antibody clone in a different buffer formulation.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 minutes.



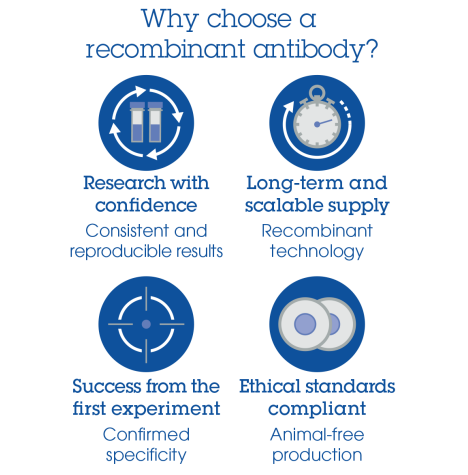
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR23947-1] - BSA and Azide free (ab278084)

This data was developed using **ab259802**, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded human epityphlon tissue labeling HLA-DPB1 with **ab259802** at 1/2000 (0.286 ug/ml) dilution followed by a ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on human epityphlon. The section was incubated with **ab259802** for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond® Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



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