

## Product datasheet

# Anti-HLA-DPB1 antibody [EPR11226] ab157210

Recombinant RabMAb

★★★★☆ [1 Abreviews](#) [16 References](#) [13 Images](#)

### Overview

<b>Product name</b>	Anti-HLA-DPB1 antibody [EPR11226]
<b>Description</b>	Rabbit monoclonal [EPR11226] to HLA-DPB1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, ICC/IF, IP <b>Unsuitable for:</b> Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	Human fetal thymus and Human tonsil lysates; Human tonsil tissue; Jurkat cells; Immunoprecipitation pellet from fetal thymus lysate.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 0.05% BSA, 59% PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR11226
<b>Isotype</b>	IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab157210 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
WB		1/10000 - 1/50000. Predicted molecular weight: 29 kDa.
IHC-P	★★★★★ (1)	1/2500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. <b>For unpurified, use 1/100 - 1/250.</b>
ICC/IF		1/50 - 1/250.
IP		1/10 - 1/100.

### Application notes

Is unsuitable for Flow Cyt.

## 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

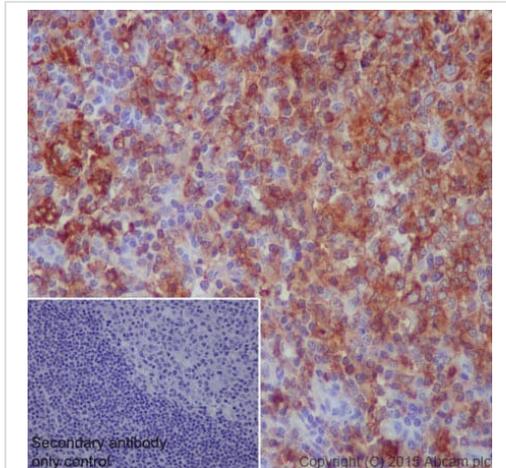
Belongs to the MHC class II family.

Contains 1 Ig-like C1-type (immunoglobulin-like) domain.

## Cellular localization

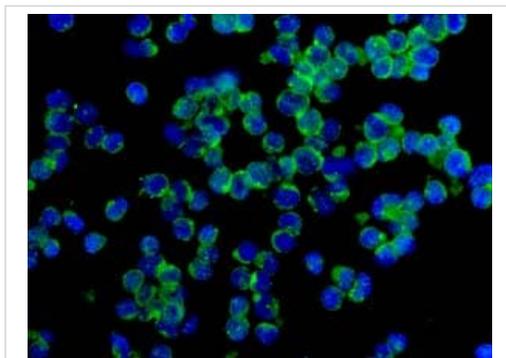
Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus, trans-Golgi network membrane. Endosome membrane. Lysosome membrane. The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation.

## Images



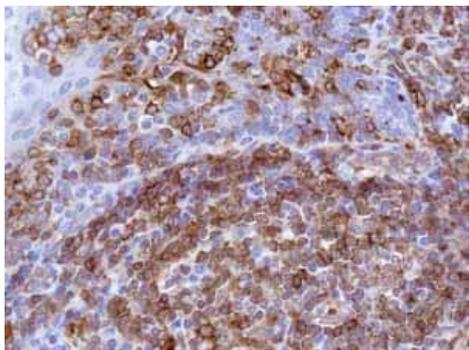
Immunohistochemical staining of paraffin embedded human tonsil with purified ab157210 at a working dilution of 1/2500. The secondary antibody used is [ab97051](#), a goat anti-rabbit IgG (H&L) at a dilution of 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)



Immunofluorescent analysis of Jurkat cells labeling MHC Class II with unpurified ab157210 at 1/50 dilution.

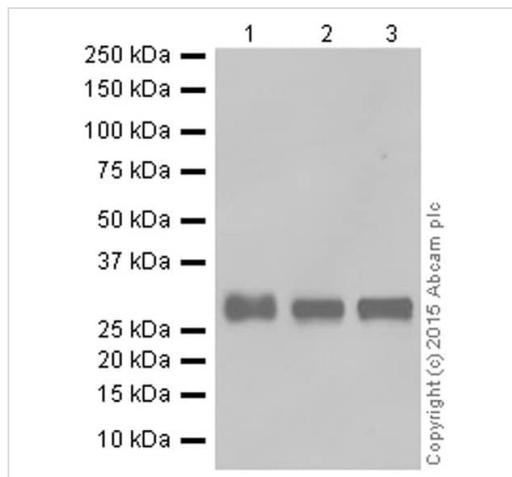
Immunocytochemistry/ Immunofluorescence - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling MHC Class II with unpurified ab157210 at 1/100 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)

**All lanes** : Anti-HLA-DPB1 antibody [EPR11226] (ab157210) at 1/20000 dilution (purified)

**Lane 1** : Human fetal thymus lysate

**Lane 2** : Human tonsil lysate

**Lane 3** : Human fetal spleen lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

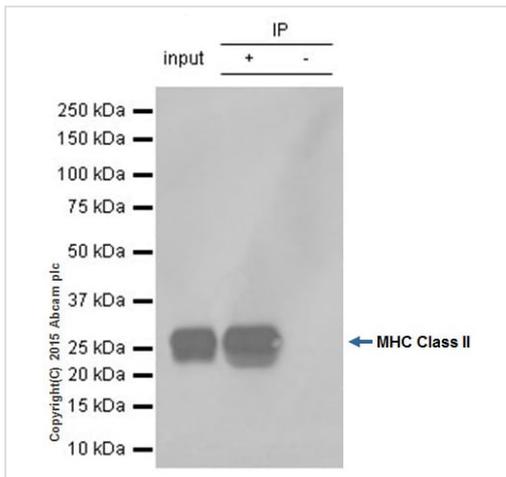
**All lanes** : Anti-rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

**Predicted band size:** 29 kDa

**Observed band size:** 29 kDa

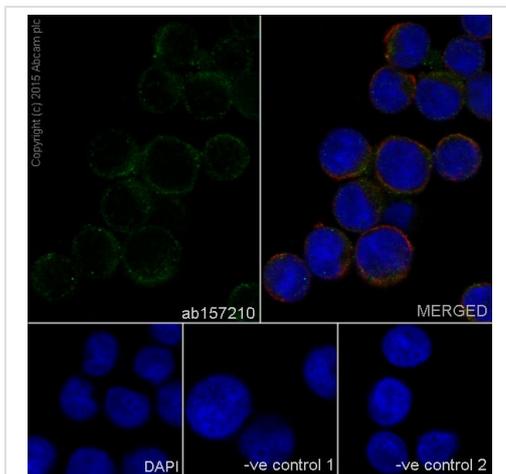
Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



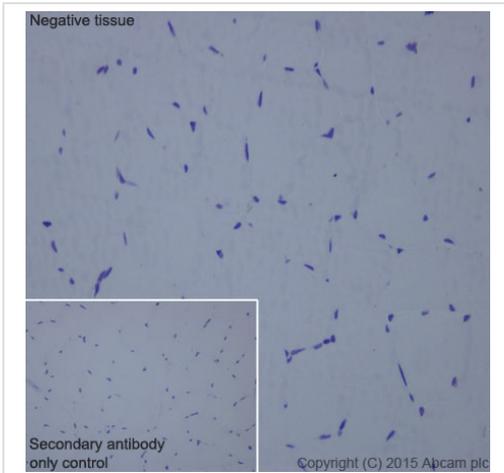
Immunoprecipitation - Anti-HLA-DPB1 antibody  
[EPR11226] (ab157210)

ab157210 (purified) at 1/70 immunoprecipitating MHC Class II in 10 µg Daudi cell lysate (Lanes 1 and 2, observed at 29 kDa). Lane 3 - Rabbit monoclonal IgG (**ab172730**). For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/1000 dilution. Blocking buffer and concentration: 5% NFDm/TBST Dilution buffer and concentration: 5% NFDm/TBST



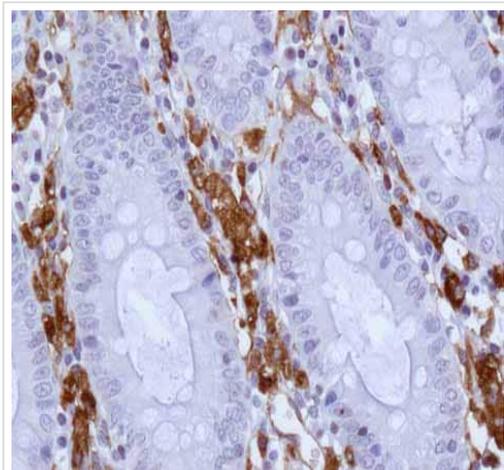
Immunocytochemistry/ Immunofluorescence - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)

Immunofluorescence staining of Raji cells with purified ab157210 at a working dilution of 1/250, counter-stained with DAPI. The secondary antibody was Alexa Fluor<sup>®</sup> 488 goat anti-rabbit (**ab150077**), used at a dilution of 1/1000. **ab7291**, a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with **ab150120** (Alexa Fluor<sup>®</sup> 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 100% methanol and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab157210 was used at a dilution of 1/500 followed by an Alexa Fluor<sup>®</sup> 594 goat anti-mouse antibody (**ab150120**) at a dilution of 1/500. For negative control 2, **ab7291** (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor<sup>®</sup> 488 goat anti-rabbit antibody (**ab150077**) at a dilution of 1/400.



Immunohistochemical staining of paraffin embedded human skeletal muscle with purified ab157210 at a working dilution of 1/2500. The secondary antibody used is **ab97051**, a goat anti-rabbit IgG (H&L) at a dilution of 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

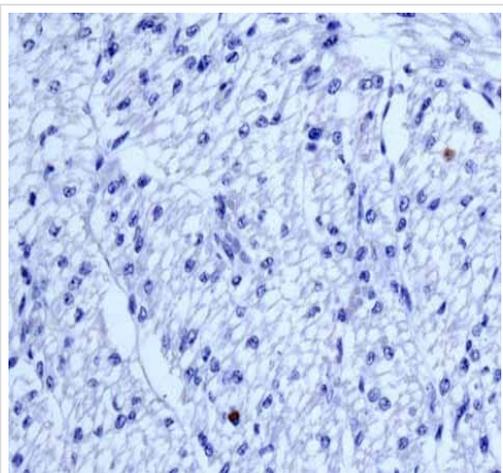
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)



Unpurified ab157210 showing positive staining in human normal colon.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

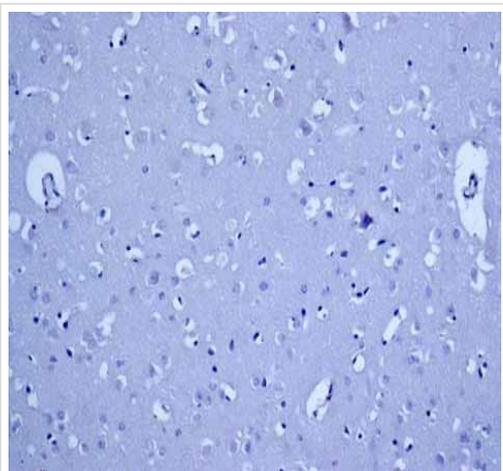
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)

Unpurified ab157210 showing negative staining in Human heart.

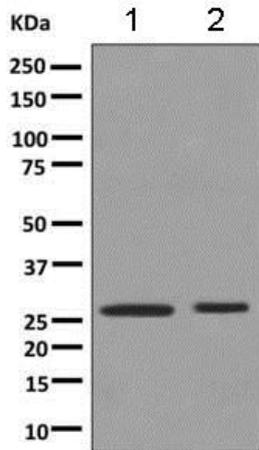
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [EPR11226] (ab157210)

Unpurified ab157210 showing negative staining in Human normal brain.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-HLA-DPB1 antibody [EPR11226]  
(ab157210)

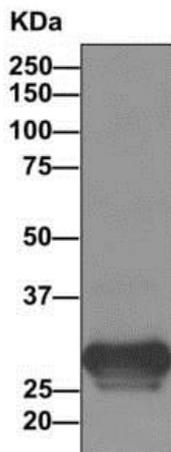
**All lanes** : Anti-HLA-DPB1 antibody [EPR11226] (ab157210) at 1/10000 dilution (Unpurified)

**Lane 1** : Human fetal thymus cell lysate

**Lane 2** : Human tonsil cell lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 29 kDa



Western blot - Anti-HLA-DPB1 antibody [EPR11226]  
(ab157210)

Anti-HLA-DPB1 antibody [EPR11226] (ab157210) at 1/10000 dilution (Unpurified) + Immunoprecipitation pellet from Human fetal thymus lysate at 10 µg

**Predicted band size:** 29 kDa

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

Anti-HLA-DPB1 antibody [EPR11226] (ab157210)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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