abcam

ab227676

Anti-HLA-DPB1 antibody [SP229]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP229
Purification technique	Affinity purification Protein A/G
Purification notes	Purified from TCS by Protein A/G.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Primary antibody incubation for 10 minutes at room temperature.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20 - 1/400
Notes	Primary antibody incubation for 10 minutes at 4°C.

WB

Tested

Species	Human
Dilution info	0.11 µg/mL
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/10
Notes	-

Target data

See full target information HLA-DPB1

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.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

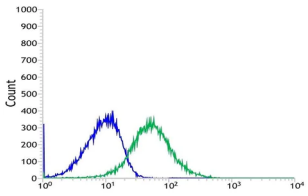
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

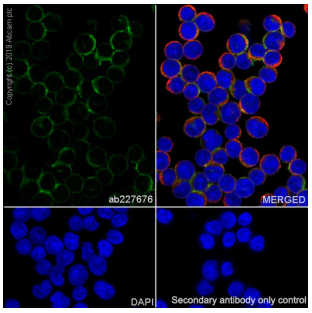
6 product images



Flow Cytometry (Intracellular) - Anti-HLA-DPB1 antibody [SP229] (ab227676)

HLA-DPB1 Flow Cytometry (Intracellular) staining using rabbit Anti-HLA-DPB1 antibody

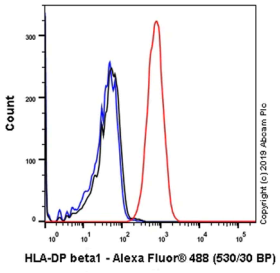
Flow cytometric analysis of Ramos (human Burkitt's lymphoma cell line) cell line labeling HLA-DPB1 with ab227676 at 1/400 dilution (green) compared with a negative control of rabbit IgG (blue).



Immunocytochemistry/ Immunofluorescence - Anti-HLA-DPB1 antibody [SP229] (ab227676)

HLA-DPB1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-HLA-DPB1 antibody

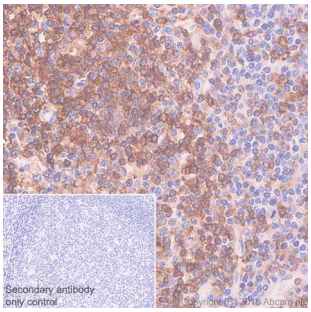
Immunocytochemistry/ Immunofluorescence analysis of Ramos (human Burkitt's lymphoma B lymphocyte) cells labeling HLA-DPB1 with purified ab227676 at 1/10 (10 µg/ml). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - 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.



Flow Cytometry (Intracellular) - Anti-HLA-DPB1 antibody [SP229] (ab227676)

HLA-DPB1 Flow Cytometry (Intracellular) staining using rabbit Anti-HLA-DPB1 antibody

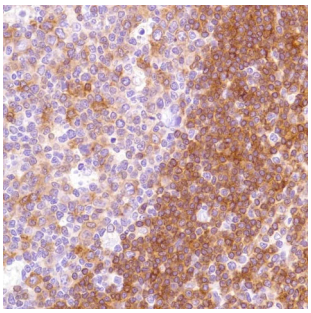
Flow Cytometry analysis of Ramos (Human Burkitt's lymphoma B lymphocyte) cells labeling HLA-DPB1 with purified ab227676 at 1/20 dilution (5.5 µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) secondary antibody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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [SP229] (ab227676)

HLA-DPB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-HLA-DPB1 antibody

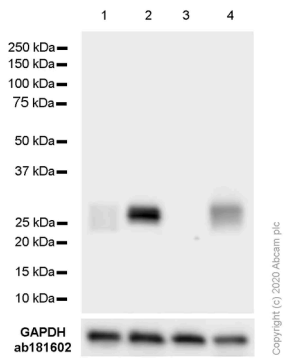
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human tonsil tissue sections labeling HLA-DPB1 with ab227676 at 1/100 dilution (1.10 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DPB1 antibody [SP229] (ab227676)

HLA-DPB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-HLA-DPB1 antibody

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



Western blot - Anti-HLA-DPB1 antibody [SP229] (ab227676)

Blocking/diluting Buffer and concentration: 5% NFDM /TBST
All lanes:
Western blot - Anti-HLA-DPB1 antibody [SP229] (ab227676) at 0.11 µg/mL

Lane 1:
Ramos (Human Burkitt's lymphoma B lymphocyte) at 20 µg

Lane 2:
Raji (Human Burkitt's lymphoma B lymphocyte) at 20 µg

Lane 3:
HeLa (Human cervix adenocarcinoma epithelial cell) at 20 µg

Lane 4:
Human spleen tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 0.05 µg/mL

Predicted band size: 29 kDa

Observed band size: 29 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.