

Anti-HLA-DRB4 antibody [EPR7182] - BSA and Azide free ab248902

Recombinant RabMAb

4 Images

Overview

Product name	Anti-HLA-DRB4 antibody [EPR7182] - BSA and Azide free
Description	Rabbit monoclonal [EPR7182] to HLA-DRB4 - 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.
General notes	<p>ab248902 is the carrier-free version of ab140612.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR7182
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab248902 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		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Detects a band of approximately 30 kDa (predicted molecular weight: 30 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.

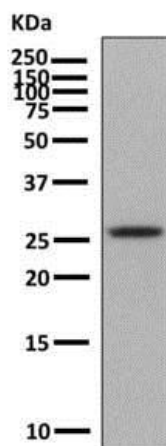
Post-translational modifications

Ubiquitinated by MARCH1 and MARCH8 at Lys-254 leading to sorting into the endosome system and down-regulation of MHC class II. When associated with ubiquitination of the alpha subunit of HLA-DR: HLA-DRA 'Lys-244', the down-regulation of MHC class II may be highly effective.

Cellular localization

Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus > trans-Golgi network membrane. Endosome membrane. Lysosome membrane. Late endosome 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



Western blot - Anti-HLA-DRB4 antibody [EPR7182] - BSA and Azide free (ab248902)

Anti-HLA-DRB4 antibody [EPR7182] ([ab140612](#)) at 1/1000 dilution
+ Raji cell lysate at 10 µg

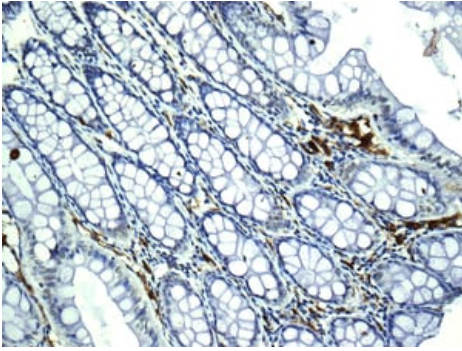
Secondary

HRP labelled goat anti-rabbit IgG at 1/2000 dilution

Predicted band size: 30 kDa

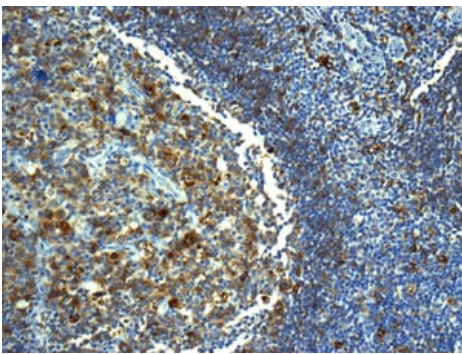
Observed band size: 30 kDa

This data was developed using [ab140612](#), the same antibody clone in a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA-DRB4 antibody [EPR7182] - BSA and Azide free (ab248902)

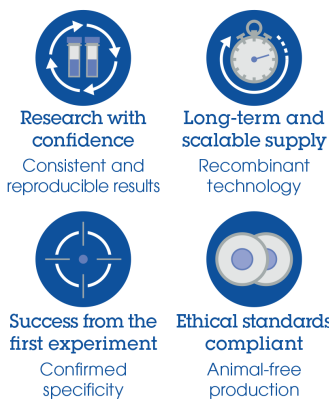
This data was developed using [ab140612](#), the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin embedded Human colon tissue labelling HLA-DRB4 using [ab140612](#) at 1/100 dilution. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



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This data was developed using [ab140612](#), the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin embedded Human tonsil tissue labelling HLA-DRB4 using [ab140612](#) at 1/100 dilution. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Anti-HLA-DRB4 antibody [EPR7182] - BSA and Azide free (ab248902)

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

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