abcam

Product datasheet

Anti-MHC Class II beta antibody [EPR11227] ab170867

Recombinant   RabMAb

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Overview

Product name	Anti-MHC Class II beta antibody [EPR11227]
Description	Rabbit monoclonal [EPR11227] to MHC Class II beta
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF **Unsuitable for:** Flow Cyt or IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide within Human MHC Class II beta (Cysteine residue). The exact sequence is proprietary. Database link: **P04440**
Positive control	WB: Raji cell lysate, human tonsil. ICC/IF: Raji cells. IHC-P: human tonsil tissue, human endometrium tissue.
General notes	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**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture

	supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR11227
Isotype	IgG

Applications

The Abpromise guarantee   Our **Abpromise guarantee** covers the use of ab170867 in the following tested applications.

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

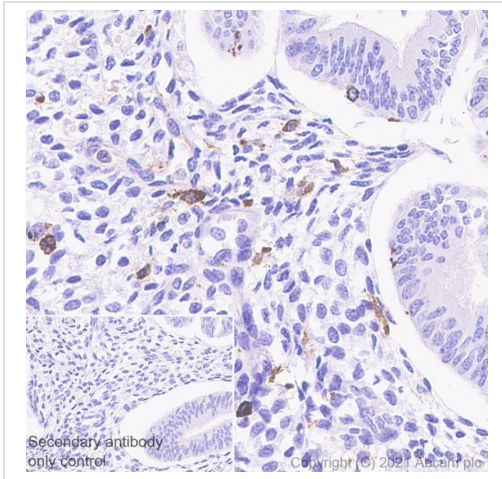| Application	Abreviews	Notes
WB		1/1000 - 1/5000. Predicted molecular weight: 29 kDa.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		1/100 - 1/250.

Application notes   Is unsuitable for Flow Cyt or IP.

Target

Relevance   Major Histocompatibility Class II molecules are primarily expressed on B-cells and antigen presenting cells (APCs). They are composed of two polypeptide chains. These polypeptides (alpha and beta) are about 230 and 240 amino acids long, respectively, and are glycosylated. These polypeptides fold into two separate domains; the non-polymorphic alpha chain and the polymorphic beta chain. The antigen binding region of the molecule is bounded by a beta-pleated sheet on the bottom and two alpha helices on the sides, and is capable of binding (via non-covalent interactions) a small peptide of about 10 amino acids.

Cellular localization   Cell Membrane

Images

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MHC Class II beta antibody [EPR11227] (ab170867)

Immunohistochemical analysis of Paraffin-embedded sections human endometrium tissue labelling MHC Class II beta with ab170867 at 1/2000 dilution, followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Counter stained with Haematoxylin.
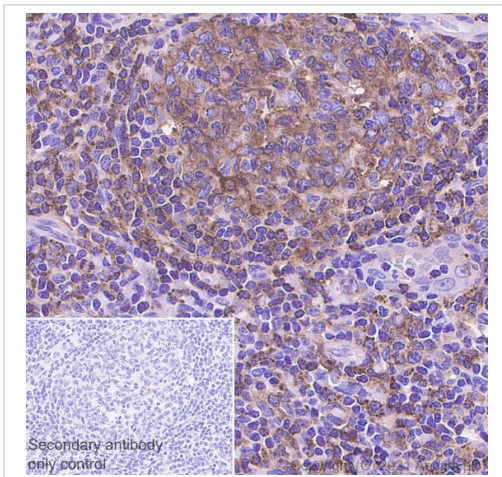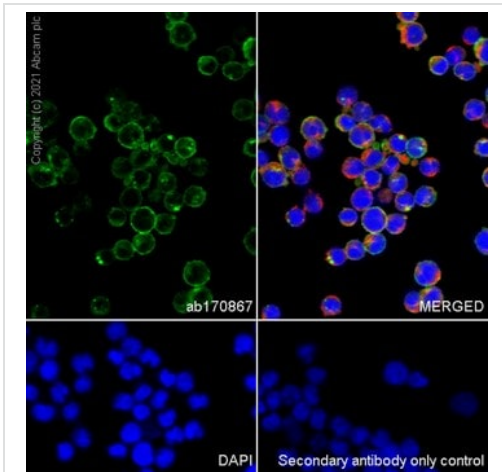
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes.

Positive staining on human endometrium.

The section was incubated with ab170867 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND®RX instrument

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MHC Class II beta antibody [EPR11227] (ab170867)

Immunohistochemical analysis of Paraffin-embedded sections human tonsil tissue labelling MHC Class II beta with ab170867 at 1/2000 dilution, followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Counter stained with Haematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes.

Positive staining on human tonsil.

The section was incubated with ab170867 for 30 mins at room temperature.
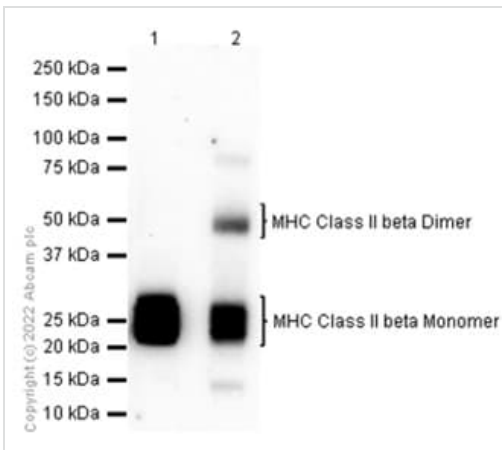
The immunostaining was performed on a Leica Biosystems BOND®RX instrument

Immunocytochemistry/ Immunofluorescence - Anti-MHC Class II beta antibody [EPR11227] (ab170867)

Immunocytochemistry/ Immunofluorescence analysis of Raji (human Burkitt's lymphoma B lymphocyte) cells labeling MHC Class II beta using ab170867. The cells were fixed with 4% paraformaldehyde then permeabilized with 0.1% Triton X-100. The cells were then incubated with ab170867 at 1:50 dilution followed by a further incubation with **ab150081** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1:1000 dilution (shown in green). Nuclear DNA was labelled in blue with DAPI. Cells were counterstained using **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1:200 dilution (shown in red). Secondary antibody only control: PBS instead of the primary antibody.

Confocal image showing membranous and cytoplasmic staining in Raji cell line

Western blot - Anti-MHC Class II beta antibody [EPR11227] (ab170867)

All lanes : Anti-MHC Class II beta antibody [EPR11227] (ab170867) at 1/10000 dilution

Lane 1 : Human tonsil lysate boiled
Lane 2 : Human tonsil lysate unboiled

Lysates/proteins at 15 μg per lane.

Secondary
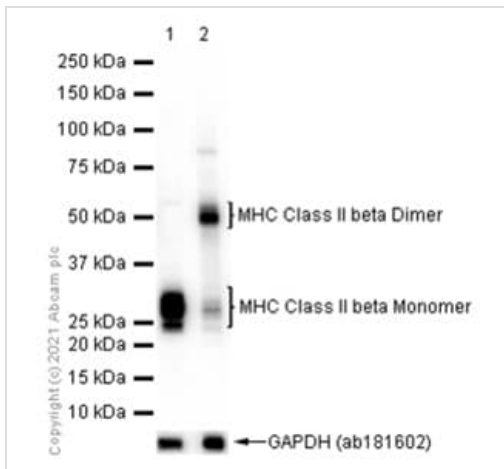**All lanes :** Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 29 kDa
Observed band size: 25-35,50-65 kDa

Exposure time: 40 seconds

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

The molecular weights observed are consistent with what have been described in the literatures representing MHC Class II beta monomer (25-35kDa) and dimer (50-65kDa) (PMID: 15322189, 17174123)

Western blot - Anti-MHC Class II beta antibody [EPR11227] (ab170867)

All lanes : Anti-MHC Class II beta antibody [EPR11227] (ab170867) at 1/2000 dilution

Lane 1 : Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate boiled

Lane 2 : Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate unboiled

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 29 kDa

Observed band size: 25-35,50-65 kDa

Exposure time: 3 seconds

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

ab181602 was used as GAPDH loading control.

The molecular weights observed are consistent with what have been described in the literatures representing MHC Class II beta monomer (25-35kDa) and dimer (50-65kDa) (PMID: 15322189, 17174123)

Why choose a recombinant antibody?

Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Anti-MHC Class II beta antibody [EPR11227]

(ab170867)

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