

PE Anti-MHC Class II antibody [M5/114.15.2] ab93560

★★★★★ [1 Abreviews](#) [6 References](#) [1 Image](#)

Overview

Product name	PE Anti-MHC Class II antibody [M5/114.15.2]
Description	PE Rat monoclonal [M5/114.15.2] to MHC Class II
Host species	Rat
Conjugation	PE. Ex: 488nm, Em: 575nm
Specificity	The M5/114.15.2 monoclonal antibody reacts with the mouse major histocompatibility complex class II, both I-A and I-E subregion encoded glycoproteins (I-A ^b , I-A ^d , I-A ^q , I-E ^d , I-E ^k , not I-A ^f , I-A ^k , or I-A ^s). It detects a polymorphic determinant present on B cells, monocytes, macrophages, dendritic cells, and activated T lymphocytes from mice carrying the H-2 ^b , H-2 ^d , H-2 ^q , H-2 ^p , H-2 ^r and H-2 ^u but not from mice carrying the H-2 ^s or H-2 ^f haplotypes. The M5/114 mnonclonal antibody is reported to inhibit I-A-restricted T cell responses of the H-2 ^b , H-2 ^d , H-2 ^q , H-2 ^u but not H-2 ^f , H-2 ^k , or H-2 ^s haplotypes.
Tested applications	Suitable for: Flow Cyt
Species reactivity	Reacts with: Mouse
Immunogen	Tissue/ cell preparation (Mouse): Activated C57BL/6 Mouse spleen cells.
Positive control	C57Bl/6 Mouse splenocytes
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.09% Sodium azide</p> <p>Constituents: 0.87% Sodium chloride, 0.16% Sodium phosphate, 0.1% Gelatin</p>
Purity	Protein G purified

Clonality	Monoclonal
Clone number	M5/114.15.2
Isotype	IgG2b
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab93560 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
Flow Cyt	★★★★★ (1)	

Application notes Flow Cyt: Use at a concentration of 0.0075 - 0.02 µg/test in a 100 µl volume.

Not yet tested in other applications.

Optimal dilutions/concentrations should be determined by the end user.

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 accomodates 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 an 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 miroenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading.

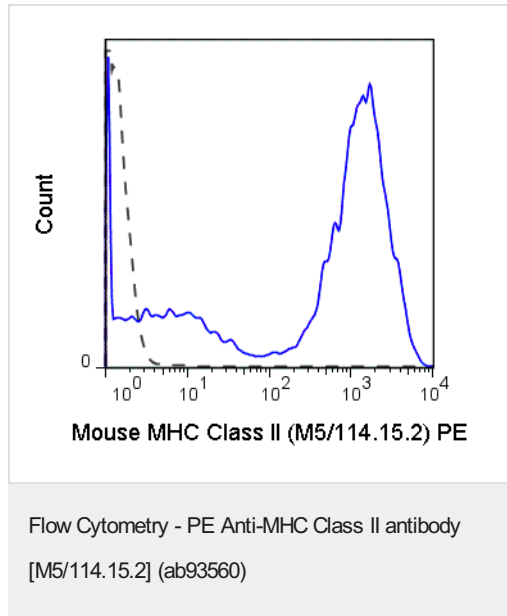
Sequence similarities Belongs to the MHC class II family.

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



Flow cytometry analysis showing C57Bl/6 splenocytes stained with ab93560 (solid line). The isotype control was Rat IgG2b PE (dashed line).

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

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