abcam

ab77134

PE Anti-HLA DR + HLA DP antibody [MEM-136]

Anti-HLA DR + HLA DP antibody [MEM-136] conjugated to PE - suitable for flow cytometry, and reacts with human samples. Clone [MEM-136] is a mouse monoclonal antibody.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing HLA-DRB1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P01911
Clone number	MEM-136
Purification technique	Size-exclusion chromatography
Specificity	ab77134 recognizes a common epitope on the beta chain of human HLA-DR and HLA-DP. It reacts with alpha/beta dimer as well as with dissociated beta subunit.
Purification notes	The protein A/G purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is then purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	20 µL for 10^6 Cells
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	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C

Notes

Conjugates are made from highly purified antibodies (>95% by SDS-PAGE).

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

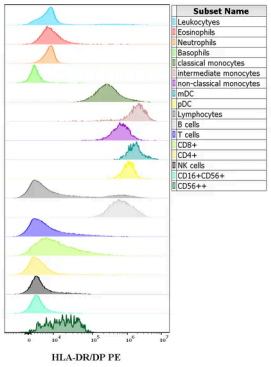
We do not recommend this combination. It is not covered by our product promise.

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2 product images

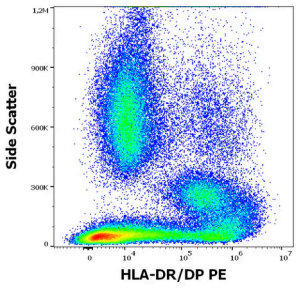


Flow Cytometry - PE Anti-HLA DR + HLA DP antibody [MEM-136] (ab77134)

HLA DR + HLA DP Flow Cytometry staining using mouse Anti-HLA DR + HLA DP antibody

Expression profiling on peripheral blood subsets using ab77134.
HCDM CDMaps standardized procedures (Kuzilkova D et al. Front Immunol. 2022;13:827898) were used for cell isolation and surface staining of blood leukocytes, with the modification of staining protocol using cytometry test tubes.
Suspension of blood leukocytes isolated from buffy coats (2 x 10^6 cells) was added to the mixture of anti-human HLA-DR/DP PE antibody (clone MEM-136, 20 µl reagent / 100 µl of stained blood

sample) and Monocyte Blocking Buffer, vortexed and incubated for 20 min. Next, optimized backbone antibody panels (HLDA Innate and HLDA Adaptive) were added to test tubes, vortexed and incubated for 20 min. The residual erythrocytes were lysed with 2 ml of 10Ч diluted EXCELLYSE Easy solution and incubated for 10 min. Finally, samples were centrifuged (670 g, 5 min.), supernatant removed and the cell pellet was resuspended in 200 µl of PBS for acquisition.



Flow Cytometry - PE Anti-HLA DR + HLA DP antibody [MEM-136] (ab77134)

HLA DR + HLA DP Flow Cytometry staining of blood leukocytes using mouse Anti-HLA DR + HLA DP antibody

Analysis of the antibody staining profile was performed on blood leukocytes isolated from buffy coats. HCDM CDMaps standardized procedures (Kuzilkova D et al. Front Immunol. 2022;13:827898) were used for cell isolation and surface staining of blood leukocytes, with the modification of staining protocol using cytometry test tubes.
ab77134 was used in amount of 20 µl in 100 µl of blood sample (2 x 10^6 cells).

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