abcam

ab136320

Anti-HLA-DR antibody [L243]

Lab Essentials

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing HLA-DRA protein. The exact immunogen used to generate this antibody is proprietary information. Database link P01903
Clone number	L243
Purification technique	Affinity purification Protein A
Specificity	ab136320 recognizes specifically HLA-DR molecules both peptide-loaded and empty.
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from cell culture supernatant by protein A affinity chromatography. Purity: > 95% (by SDS-PAGE).

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-4 µg/mL
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Target data

See full target information HLA-DRA

Function	An alpha chain of antigen-presenting major histocompatibility complex class II (MHCII) molecule. In complex with the beta chain HLA-DRB, displays antigenic peptides on professional antigen presenting cells (APCs) for recognition by alpha-beta T cell receptor (TCR) on HLA-DR-restricted CD4-positive T cells. This guides antigen-specific T-helper effector functions, both antibody-mediated immune response and macrophage activation, to ultimately eliminate the infectious agents and transformed cells (PubMed:15265931, PubMed:15322540, PubMed:17334368, PubMed:22327072, PubMed:24190431, PubMed:27591323, PubMed:29884618, PubMed:31495665, PubMed:8145819, PubMed:9075930). Typically presents extracellular peptide antigens of 10 to 30 amino acids that arise from proteolysis of endocytosed antigens in lysosomes (PubMed:8145819). In the tumor microenvironment, presents antigenic peptides that are primarily generated in tumor-resident APCs likely via phagocytosis of apoptotic tumor cells or macropinocytosis of secreted tumor proteins (PubMed:31495665). Presents peptides derived from intracellular proteins that are trapped in autolysosomes after macroautophagy, a mechanism especially relevant for T cell selection in the thymus and central immune tolerance (PubMed:17182262, PubMed:23783831). The selection of the immunodominant epitopes follows two processing modes: 'bind first, cut/trim later' for pathogen-derived antigenic peptides and 'cut first, bind later' for autoantigens/self-peptides (PubMed:25413013). The anchor residue at position 1 of the peptide N-terminus, usually a large hydrophobic residue, is essential for high affinity interaction with MHCII molecules (PubMed:8145819).

Storage

Shipped at conditions	Blue Ice
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

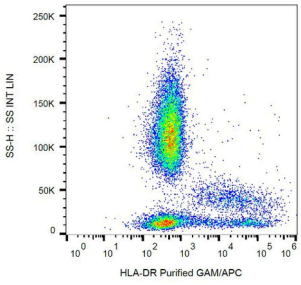
We do not recommend this combination. It is not covered by our product promise.

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.

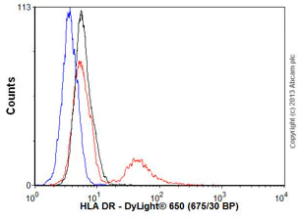
2 product images



Flow Cytometry - Anti-HLA-DR antibody [L243] (ab136320)

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

Flow Cytometry analysis of human peripheral blood cells labeling HLA DR with ab136320, followed by a Goat anti-mouse-APC secondary.



Flow Cytometry - Anti-HLA-DR antibody [L243] (ab136320)

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

Human peripheral blood lymphocytes stained with ab136320 (red line). Human whole blood was processed using a modified protocol based on Chow *et al*, 2005 (PMID: 16080188).
In brief, human whole blood was fixed in 4% formaldehyde (methanol-free) for 10 minutes at 22°C. Red blood cells were then lyzed by the addition of Triton X-100 (final concentration - 0.1%) for 15 minutes at 37°C. For experimentation, cells were treated with 50% methanol (-20°C) for 15 minutes

at 4°C. Cells were then incubated with the antibody (ab136320, 0.1µg/1x10^6 cells) for 30 minutes at 4°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) (ab150113) at 1/2000 dilution for 30 minutes at 4°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (ab91361, 0.1µg/1x10^6cells) used under the same conditions. Unlabeled sample (blue line) was also used as a control. Acquisition of >30,000 total events were collected using a solid-state 25mW red diode laser (635nm) and 675/30 bandpass filter. Gating strategy - peripheral blood lymphocytes.

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