

PE/Cyanine5 anti-human HLA-DR Antibody

Catalog# / Size	307607 / 25 tests 307608 / 100 tests
Clone	L243
Regulatory Status	RUO
Other Names	Major Histocompatibility Class II, MHC class II
Isotype	Mouse IgG2a, κ
Description	HLA-DR is a heterodimeric cell surface glycoprotein comprised of a 36 kD α (heavy) chain and a 27 kD β (light) chain. It is expressed on B cells, activated T cells, monocytes/macrophages, dendritic cells, and other non-professional APCs. In conjunction with the CD3/TCR complex and CD4 molecules, HLA-DR is critical for efficient peptide presentation to CD4 ⁺ T cells.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Chimpanzee, Dog, Common Marmoset, Squirrel Monkey, Cotton-topped Tamarin
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE/Cyanine5 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	<p>The L243 monoclonal antibody reacts with the HLA-DR antigen, a member of MHC class II molecules. It does not cross react with HLA-DP and HLA-DQ. Clone L243 binds a conformational epitope on HLA-DRα which depends on the correct folding of the αβ heterodimer.¹⁹</p> <p>Additional reported applications (for the relevant formats) include: immunoprecipitation⁸, Western blotting⁸, <i>in vitro</i> blocking of mixed lymphocyte reactions^{9,10}, depletion of MHC class II cells⁷, immunohistochemical staining of acetone-fixed frozen sections^{4,5}, and spatial biology (IBEX)^{21,22}. For sensitive functional assays, we recommend using the Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) (Cat. No. 307648, 307665 - 307669).</p>
Additional Product Notes	BioLegend is in the process of converting the name PE/Cy5 to PE/Cyanine5. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine5 products. Please contact Technical Service if you have any questions.
Application References	<ol style="list-style-type: none"> 1. Brodsky F. 1984. <i>Immunogenetics</i> 19:179. 2. Robbins P, <i>et al.</i> 1987. <i>Human Immunol.</i> 18:301. 3. Stites D, <i>et al.</i> 1986. <i>Clin. Immunol. Immunopathol.</i> 38:161.
(PubMed link indicates BioLegend citation)	

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Product Citations

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2. Gleason M, *et al.* 2014. *Blood.* 123:3016. [PubMed](#)
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4. Mpakou V, *et al.* 2021. *Exp Ther Med.* 1.010416667. [PubMed](#)
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6. Johnson JS *et al.* 2018. *Cell host & microbe.* 23(3):366-381 . [PubMed](#)
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9. Opitz C, *et al.* 2009. *Stem Cells.* 27:909. [PubMed](#)

RRID

AB_314685 (BioLegend Cat. No. 307607)
 AB_314686 (BioLegend Cat. No. 307608)

Antigen Details

Structure	Ig superfamily, MHC class II, heterodimeric transmembrane protein, 36 kD heavy and 27 kD light chain
Distribution	B cells, activated T cells, monocytes/macrophages, dendritic cells, other APCs
Function	Peptide presentation
Ligand/Receptor	CD3/TCR, CD4
Cell Type	Antigen-presenting cells, B cells, Dendritic cells, Macrophages, Monocytes, T cells, Tregs
Biology Area	Immunology, Innate Immunity
Molecular Family	MHC Antigens
Antigen References	<ol style="list-style-type: none"> 1. Levacher M, <i>et al.</i> 1990. <i>Clin. Exp. Immunol.</i> 81:177. 2. Terstappen L, <i>et al.</i> 1990. <i>J. Leukocyte Biol.</i> 48:138. 3. Edwards JA, <i>et al.</i> 1986. <i>J. Immunol.</i> 137:490. 4. van Es A, <i>et al.</i> 1984. <i>Transplantation</i> 37:65. 5. O'Doherty U, <i>et al.</i> 1994. <i>Immunology</i> 82:487. 6. Thomas R, <i>et al.</i> 1994. <i>J. Immunol.</i> 153:4016. 7. Grouard G, <i>et al.</i> 1996. <i>Nature</i> 384:364.
Gene ID	3122 3123

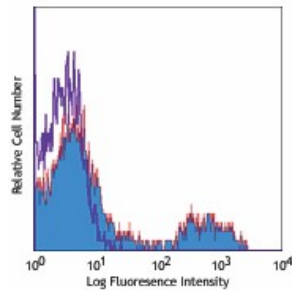
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human HLA-DR, FITC anti-human HLA-DR, PE anti-human HLA-DR, PE/Cyanine5 anti-human HLA-DR, Purified anti-human HLA-DR, Biotin anti-human HLA-DR, PE/Cyanine7 anti-human HLA-DR, APC/Cyanine7 anti-human HLA-DR, Alexa Fluor® 488 anti-human HLA-DR, Alexa Fluor® 647 anti-human HLA-DR, Pacific Blue™ anti-human HLA-DR, Alexa Fluor® 700 anti-human HLA-DR, PerCP anti-human HLA-DR, PerCP/Cyanine5.5 anti-human HLA-DR, Brilliant Violet 605™ anti-human HLA-DR, Brilliant Violet 421™ anti-human HLA-DR, Brilliant Violet 570™ anti-human HLA-DR, Brilliant Violet 711™ anti-human HLA-DR, Brilliant Violet 785™ anti-human HLA-DR, Brilliant Violet 510™ anti-human HLA-DR, Ultra-LEAF™ Purified anti-human HLA-DR, Brilliant Violet 650™ anti-human HLA-DR, TotalSeq™-A0159 anti-human HLA-DR, TotalSeq™-B0159 anti-human HLA-DR, TotalSeq™-C0159 anti-human HLA-DR, Brilliant Violet 750™ anti-human HLA-DR, APC/Fire™ 810 anti-human HLA-DR, PE/Fire™ 640 anti-human HLA-DR, Spark Violet™ 538 anti-human HLA-DR Antibody, KIRAVIA Blue 520™ anti-human HLA-DR, TotalSeq™-D0159 anti-human HLA-DR, PE/Fire™ 810 anti-human HLA-DR, GMP PE/Dazzle™ 594 anti-human HLA-DR, Spark Violet™ 423 anti-human HLA-DR, GMP FITC anti-human HLA-DR, GMP APC anti-human HLA-DR, GMP PE/Cyanine7 anti-human HLA-DR, GMP Pacific Blue™ anti-human HLA-DR, GMP APC/Fire™ 750 anti-human HLA-DR

Product Data



Human peripheral blood lymphocytes stained with L243 PE/Cyanine5

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