

GMP Pacific Blue™ anti-human HLA-DR Antibody

Catalog# / Size	260164 / 100 tests
Clone	L243
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

Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Pacific Blue™ under optimal conditions.
Concentration	200 μ g/mL
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	<p>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. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p>
Excitation Laser	Violet Laser (405 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-DRA which depends on the correct folding of the $\alpha\beta$ 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>
Application References	<ol style="list-style-type: none"> 1. Brodsky F. 1984. <i>Immunogenetics</i> 19:179. 2. Robbins P, et al. 1987. <i>Human Immunol.</i> 18:301. 3. Stites D, et al. 1986. <i>Clin. Immunol. Immunopathol.</i> 38:161. 4. Warnke R, et al. 1980. <i>J. Histochem. Cytochem.</i> 28:771. (IHC) 5. Engleman E, et al. 1981. <i>P. Natl. Acad. Sci. USA</i> 78:1791. (IHC) 6. Zipf T, et al. 1981. <i>Cancer Res.</i> 41:4786. 7. Goodier M, et al. 2000. <i>J. Immunol.</i> 165:139. (Depletion) 8. Esser M, et al. 2001. <i>J. Virol.</i> 75:6173. (IP, WB) 9. Kalka-Moll WM, et al. 2002. <i>J. Immunol.</i> 169:6149. (Block)
(PubMed link indicates BioLegend citation)	

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Disclaimer

GMP RUO Flow Cytometry Antibodies. BioLegend GMP RUO fluorophore conjugated antibodies are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research use only. Not for use in diagnostic or therapeutic procedures. Our processes include:

- Batch-to-batch consistency
- Material traceability
- Documented procedures
- Documented employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- Quality audits per ISO 13485:2016
- QA review of released products

Antigen Details

Structure	lg 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

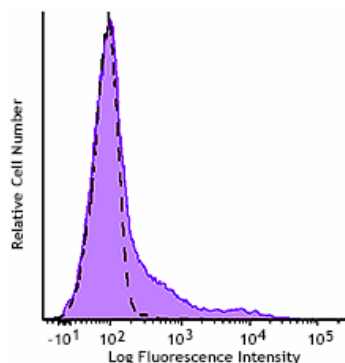
[Cell Surface Flow Cytometry Staining Protocol](#)

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, Purified anti-human HLA-DR (Maxpar® Ready), PE/Dazzle™ 594 anti-human HLA-DR, APC/Fire™ 750 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

Product Data



Typical results from human peripheral blood lymphocytes stained either with clone L243 Pacific Blue™ used at 5 μ L/test (filled histogram) or with an isotype control (open histogram).

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