

## APC/Fire™ 810 anti-human HLA-DR Antibody

<b>Catalog# / Size</b>	307673 / 25 tests 307674 / 100 tests
<b>Clone</b>	L243
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Major Histocompatibility Class II, MHC class II
<b>Isotype</b>	Mouse IgG2a, κ
<b>Description</b>	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 <sup>+</sup> T cells.

### Product Details

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<b>Verified Reactivity</b>	Human, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	African Green, Baboon, Chimpanzee, Dog, Common Marmoset, Squirrel Monkey, Cotton-topped Tamarin
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with APC/Fire™ 810 under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a>. 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>* APC/Fire™ 810 has a maximum excitation of 650 nm and a maximum emission of 810 nm.</p> <p>Excessive exposure to light, and commonly used fixation, permeabilization buffers can affect APC/Fire™ 810 fluorescence signal intensity and spread. Please keep conjugates protected from light exposure. For more information and representative data, visit our <a href="#">Fire Dyes</a> page.</p>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	<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 αβ heterodimer.<sup>19</sup></p> <p>Additional reported applications (for the relevant formats) include: immunoprecipitation<sup>8</sup>, Western blotting<sup>8</sup>, <i>in vitro</i> blocking of mixed lymphocyte reactions<sup>9,10</sup>, depletion of MHC class II cells<sup>7</sup>, immunohistochemical staining of acetone-fixed frozen sections<sup>4,5</sup>, and spatial biology (IBEX)<sup>21,22</sup>. For sensitive functional assays, we recommend using the Ultra-LEAF™ purified antibody (Endotoxin &lt; 0.01 EU/µg, Azide-Free, 0.2 µm filtered) (Cat. No. 307648, 307665 - 307669).</p>
<b>Application References</b>	1. Brodsky F. 1984. <i>Immunogenetics</i> 19:179.

(PubMed link indicates BioLegend citation)

2. Robbins P, et al. 1987. *Human Immunol.* 18:301.
3. Stites D, et al. 1986. *Clin. Immunol. Immunopathol.* 38:161.
4. Warnke R, et al. 1980. *J. Histochem. Cytochem.* 28:771. (IHC)
5. Engleman E, et al. 1981. *P. Natl. Acad. Sci. USA* 78:1791. (IHC)
6. Zipf T, et al. 1981. *Cancer Res.* 41:4786.
7. Goodier M, et al. 2000. *J. Immunol.* 165:139. (Depletion)
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9. Kalka-Moll WM, et al. 2002. *J. Immunol.* 169:6149. (Block)
10. Wang RF, et al. 1999. *Science* 284:1351. (Block)
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12. Fujita H, et al. 2009. *P. Natl. Acad. Sci. USA* 106:21795. [PubMed](#)
13. Charles N, et al. 2010. *Nat. Med.* 16:701. (FC) [PubMed](#)
14. Goncalves RM, et al. 2010. *Infect. Immun.* 78:4763. [PubMed](#)
15. Yoshino N, et al. 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
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18. Galkowska H, et al. 1996. *Vet. Immunol. Immunopathol.* 53:329.
19. Moro M, et al. 2005. *BMC Immunol.* 6:24.
20. Lauterbach N, et al. 2014. *Mol Immunol.* 59:19. [PubMed](#)
21. Radtke AJ, et al. 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
22. Radtke AJ, et al. 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

#### Product Citations

1. Mulder K, et al. 2021. *Immunity.* 54(8):1883-1900.e5. [PubMed](#)

#### RRID

AB\_2876603 (BioLegend Cat. No. 307673)  
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## Antigen Details

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

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

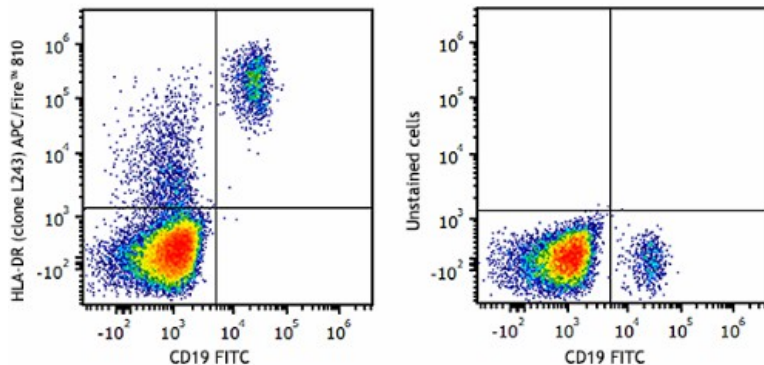
## Other Formats

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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, GMP PE/Cyanine7 anti-human HLA-DR, GMP Pacific Blue™ anti-human HLA-DR, GMP APC/Fire™ 750 anti-human HLA-DR, Spark Violet™ 500 anti-human HLA-DR

## Product Data



Human peripheral blood lymphocytes were stained with CD19 FITC and HLA-DR (clone L243) APC/Fire™ 810 (left), or CD19 FITC only (right).

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