

## Alexa Fluor<sup>®</sup> 700 anti-human HLA-DR Antibody

<b>Catalog# / Size</b>	307625 / 25 µg 307626 / 100 µg
<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.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor <sup>®</sup> 700 under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<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>. The suggested use of this reagent is ≤2.0 µg per million cells in 100 µl volume. It is highly recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor<sup>®</sup> 700 has a maximum emission of 719 nm when it is excited at 633 nm / 635 nm. Prior to using Alexa Fluor<sup>®</sup> 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor<sup>®</sup> and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></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>

### Application References

1. Brodsky F. 1984. *Immunogenetics* 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)
8. Esser M, et al. 2001. *J. Virol.* 75:6173. (IP, WB)
9. Kalka-Moll WM, et al. 2002. *J. Immunol.* 169:6149. (Block)
10. Wang RF, et al. 1999. *Science* 284:1351. (Block)
11. Zaba LC, et al. 2007. *J. Exp. Med.* 204:3183. [PubMed](#)
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)
16. Kim WK, et al. 2006. *Am. J. Pathol.* 168:822. (FC)
17. Stein R, et al. 2011. *Leuk. Lymphoma* 52:273.
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. Baguma R, et al. 2017. *PLoS One.* 10.1371/journal.pone.0184563. [PubMed](#)
2. Jing Li et al. 2018. *Immunity.* 48(4):773-786 . [PubMed](#)
3. Bradley T et al. 2018. *Cell.* 175(2):387-399 . [PubMed](#)
4. Ickrath P, et al. 2019. *Biomed Rep.* 10:119. [PubMed](#)
5. Magri G et al. 2017. *Immunity.* 47(1):118-134 . [PubMed](#)
6. Di Blasi D, et al. 2019. *Cell Mol Gastroenterol Hepatol.* 0.510416667. [PubMed](#)
7. Meyer SN, et al. 2020. *Immunity.* 51(3):535-547. [PubMed](#)
8. Parackova Z, et al. 2020. *Sci Rep.* 0.759027778. [PubMed](#)
9. Fujita H, et al. 2009. *Proc Natl Acad Sci U S A.* 106:21795. [PubMed](#)
10. çalves R, et al. 2010. *Infect Immun.* 78:4763. [PubMed](#)
11. Belisle S, et al. 2011. *PLoS One.* 6:e19681. [PubMed](#)
12. Shey M, et al. 2014. *J Immunol.* 192:4833. [PubMed](#)
13. Wenzel U, et al. 2014. *PLoS One.* 9:100217. [PubMed](#)
14. Olagnier D, et al. 2014. *PLoS Pathog.* 10:1004566. [PubMed](#)
15. Mester B, et al. 2015. *PLoS One.* 10: e0140432. [PubMed](#)
16. Carvelli J, et al. 2020. *Nature.* 588:146. [PubMed](#)
17. Obradovic A, et al. 2021. *Cell.* 184(11):2988-3005.e16. [PubMed](#)

#### RRID

AB\_493770 (BioLegend Cat. No. 307625)  
AB\_493771 (BioLegend Cat. No. 307626)

## 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>

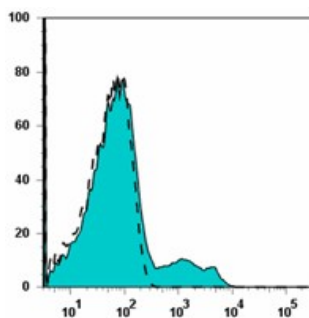
## Related Protocols

[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, 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 Alexa Fluor® 700

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