

## Purified anti-human HLA-DR (Maxpar<sup>®</sup> Ready) Antibody

<b>Catalog# / Size</b>	307651 / 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

<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 EDTA.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<b>Concentration</b>	1.0 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">CyTOF<sup>®</sup> - Verified</a>
<b>Recommended Usage</b>	This product is suitable for use with the <a href="#">Maxpar<sup>®</sup> Metal Labeling Kits</a> . For metal labeling using Maxpar <sup>®</sup> Ready antibodies, proceed directly to the step to Partially Reduce the Antibody by adding 100 µl of Maxpar <sup>®</sup> Ready antibody to 100 µl of 4 mM TCEP-R in a 50 kDa filter and continue with the protocol. Always refer to the latest version of Maxpar <sup>®</sup> User Guide when conjugating Maxpar <sup>®</sup> Ready antibodies.
<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-DRα 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>Additional Product Notes</b>	Maxpar <sup>®</sup> is a registered trademark of Standard BioTools Inc.
<b>Application References</b>	<ol style="list-style-type: none"> <li>1. Brodsky F. 1984. <i>Immunogenetics</i> 19:179.</li> <li>2. Robbins P, et al. 1987. <i>Human Immunol.</i> 18:301.</li> <li>3. Stites D, et al. 1986. <i>Clin. Immunol. Immunopathol.</i> 38:161.</li> <li>4. Warnke R, et al. 1980. <i>J. Histochem. Cytochem.</i> 28:771. (IHC)</li> <li>5. Engleman E, et al. 1981. <i>P. Natl. Acad. Sci. USA</i> 78:1791. (IHC)</li> <li>6. Zipf T, et al. 1981. <i>Cancer Res.</i> 41:4786.</li> <li>7. Goodier M, et al. 2000. <i>J. Immunol.</i> 165:139. (Depletion)</li> <li>8. Esser M, et al. 2001. <i>J. Virol.</i> 75:6173. (IP, WB)</li> <li>9. Kalka-Moll WM, et al. 2002. <i>J. Immunol.</i> 169:6149. (Block)</li> </ol>

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## Product Citations

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2. Arunachalam PS, *et al.* 2021. *Nature.* 596:410. [PubMed](#)
3. Alcántara-Hernández M, *et al.* 2021. *Nat Protoc.* 16:4855. [PubMed](#)
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8. Wimmers F, *et al.* 2021. *Cell.* 184:3915. [PubMed](#)
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## RRID

AB\_2562826 (BioLegend Cat. No. 307651)

## Antigen Details

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<b>Structure</b>	lg 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, <i>et al.</i> 1990. <i>Clin. Exp. Immunol.</i> 81:177.</li> <li>2. Terstappen L, <i>et al.</i> 1990. <i>J. Leukocyte Biol.</i> 48:138.</li> <li>3. Edwards JA, <i>et al.</i> 1986. <i>J. Immunol.</i> 137:490.</li> <li>4. van Es A, <i>et al.</i> 1984. <i>Transplantation</i> 37:65.</li> <li>5. O'Doherty U, <i>et al.</i> 1994. <i>Immunology</i> 82:487.</li> <li>6. Thomas R, <i>et al.</i> 1994. <i>J. Immunol.</i> 153:4016.</li> <li>7. Grouard G, <i>et al.</i> 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

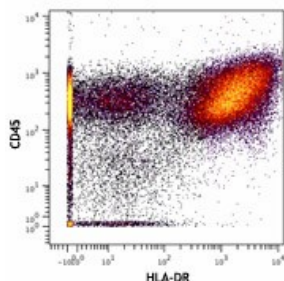
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APC anti-human HLA-DR, FITC anti-human HLA-DR, PE anti-human HLA-DR, PE/Cyanine5 anti-human HLA-DR, Purified anti-human HLA-DR, Biotin anti-human HLA-DR, PE/Cyanine7 anti-human HLA-DR, APC/Cyanine7 anti-human HLA-DR, Alexa Fluor® 488 anti-human HLA-DR, 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

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Human PBMCs stained with 154Sm-anti-CD45 (HI30) and 174Yb-anti-HLA-DR (L243). Data provided by DVS Sciences.

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