SONY

Product Data Sheet

Brilliant Violet 510™ anti-human HLA-DR

Catalog # / Size: 2138230 / 100 tests
2138225 / 25 tests

Clone: L243

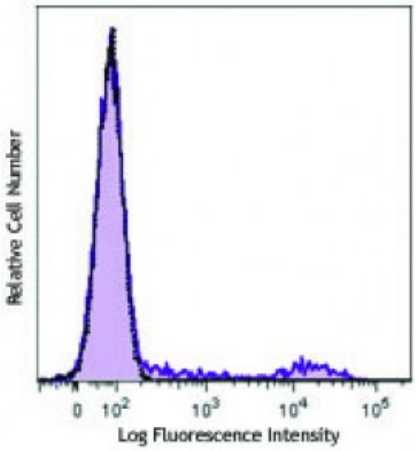
Isotype: Mouse IgG2a, κ

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 510™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 510™ and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

Concentration: Lot-specific



Human peripheral blood lymphocytes were stained with HLA-DR (clone L243) Brilliant Violet 510™ (filled histogram) or mouse IgG2a, κ Brilliant Violet 510™ isotype control (open histogram).

Applications:

Applications: Flow Cytometry

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 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 510™ is a trademark of Sirigen Group Ltd.

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Application Notes: 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]

Additional reported applications (for the relevant formats) include: immunoprecipitation[8], Western blotting[8], *in vitro* blocking of mixed lymphocyte reactions[9,10], depeletion of MHC class II cells[7], and immunohistochemical staining of acetone-fixed frozen sections[4,5]. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat.

No. 307612). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 307648) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).

Application References:

1. Brodsky F. 1984. *Immunogenetics* 19:179.
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

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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.

Antigen References:

1. Levacher M, *et al.* 1990. *Clin. Exp. Immunol.* 81:177.
2. Terstappen L, *et al.* 1990. *J. Leukocyte Biol.* 48:138.
3. Edwards JA, *et al.* 1986. *J. Immunol.* 137:490.
4. van Es A, *e*