

# Product Data Sheet

## Alexa Fluor® 647 anti-human HLA-DR

**Catalog # / Size:** 307621 / 25 tests  
307622 / 100 tests

**Clone:** L243

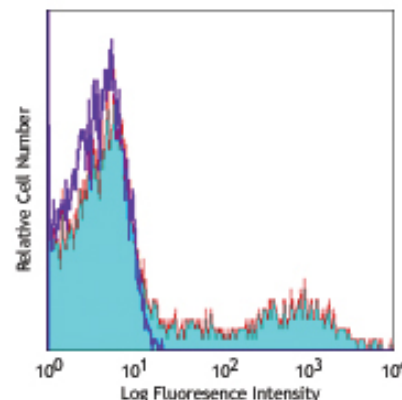
**Isotype:** Mouse IgG2a,  $\kappa$

**Reactivity:** Human, **Cross-Reactivity:** African Green, Baboon, Chimpanzee, Common Marmoset, Cotton-topped Tamarin, Cynomolgus, Pigtailed Macaque, Rhesus, Squirrel Monkey, Dog (Canine)<sup>17, 18</sup>

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 647.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

**Storage:** The antibody solution should be stored undiluted at 4°C and protected from prolonged exposure to light. **Do not freeze.**



Human peripheral blood lymphocytes stained with L243 Alexa Fluor® 647

## Applications:

**Applications:** FC - Quality tested

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is 5  $\mu$ l per million cells or 5  $\mu$ l per 100  $\mu$ l of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

\* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.

\*\* Alexa Fluor® is a registered trademark of Molecular Probes, Inc. Alexa Fluor® dye antibody conjugates are sold under license from Molecular Probes, Inc. for research use only, except for use in combination with microarrays and high content screening, and are covered by pending and issued patents.

**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. Additional reported applications (for the relevant formats) include: immunoprecipitation<sup>8</sup>, Western blotting<sup>8</sup>, *in vitro* blocking of mixed lymphocyte reactions<sup>7,9,10</sup>, and immunohistochemical staining of acetone-fixed frozen sections<sup>4,5</sup>. The LEAF™ purified antibody (Endotoxin <0.1 EU/ $\mu$ g, Azide-Free, 0.2  $\mu$ m 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/ $\mu$ g).

- 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. (Block)
  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.

**Description:** HLA-DR is a heterodimeric cell surface glycoprotein comprised of a 36 kD  $\alpha$  (heavy) chain and a 27 kD  $\beta$  (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.

- 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.



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4. van Es A, *et al.* 1984. *Transplantation* 37:65.
5. O'Doherty U, *et al.* 1994. *Immunology* 82:487.
6. Thomas R, *et al.* 1994. *J. Immunol.* 153:4016.
7. Grouard G, *et al.* 1996. *Nature* 384:364.

Related Products:	Product	Clone	Application
	Cell Staining Buffer		FC, ICC, ICFC
	RBC Lysis Buffer (10X)		FC, ICFC
	Alexa Fluor® 647 Mouse IgG2a, κ	MOPC-173	FC, ICFC
	Isotype Ctrl		
	Human TruStain FcX™ (Fc Receptor Blocking Solution)		FC, ICC, ICFC



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