

Alexa Fluor® 647 anti-mouse Ly49D

Catalog # / Size: 138306 / 100 µg

Clone: 4E5

Isotype: Rat IgG2a, κ

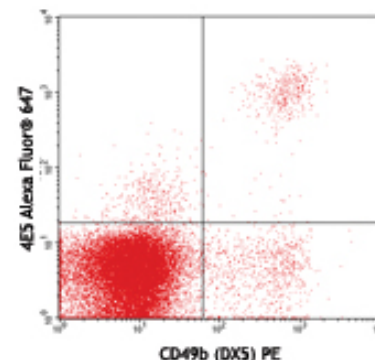
Reactivity: Mouse

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.

Concentration: 0.5 mg/ml

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



C57BL/6 splenocytes stained with CD49b (DX5) PE and 4E5 Alexa Fluor® 647

Applications:

Applications: FC - Quality tested

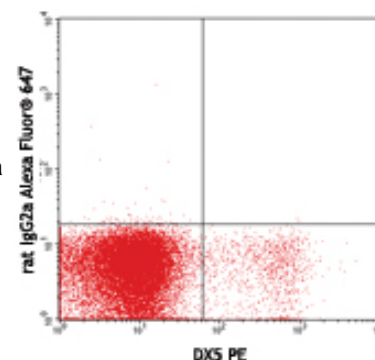
Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

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

** Alexa Fluor® 647 is a registered trademark of Molecular Probes, Inc. Alexa Fluor® 647 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: Additional reported applications (for relevant formats) include: immunoprecipitation¹ and blocking^{2, 3} of CHO cell or Con A-activated lymphoblast killing by NK cells.

- Application References:**
1. Mason LH, *et al.* 1998. *J. Immunol.* 160:4148. (IP)
 2. Idris A, *et al.* 1999. *Proc. Natl. Acad. Sci.* 96:6330. (FC Block)
 3. George TC, *et al.* 1999. *J. Immunol.* 162:2035. (FC Block)
 4. Ortaldo JR, *et al.* 1999. *J. Leukoc. Biol.* 66:512. (FC)
 5. Ortaldo JR, *et al.* 1998. *J. Immunol.* 160:1158. (FC)



C57BL/6 splenocytes stained with CD49b (DX5) PE and rat IgG2a Alexa Fluor® 647

Description: Ly49D is a type II transmembrane protein belonging to the Ly49 family of NK-cell receptors in the C-type lectin superfamily. Ly49D is expressed on subsets of natural killer (NK) cells in C57BL/6, C3H/He and SJL mouse strains, but not Balb/c, DBA/2, AKR and CBA/J. The receptors form homodimers that bind to MHC class I alloantigens. Unlike inhibitory Ly49 family members, Ly49D lacks a cytoplasmic immunoreceptor tyrosine-based inhibitory motif (ITIM) but contains a cytoplasmic immunoreceptor tyrosine-based activation motif. The activating receptor Ly49D delivers stimulatory signals for target cell lysis upon interacting with H2-D^d, D^r and D^{sp2}, but not with H2^b or H2^k class I antigens. Cross-linking of Ly49D activates intracellular kinase activity and calcium mobilization in NK cells. In 129/J mice, 4E5 antibody cross-reacts with Ly49O, LY49R and Ly49V.

- Antigen References:**
1. Yokoyama WM and Seaman WE. 1993. *Annu. Rev. Immunol.* 11:613.
 2. Takei F, *et al.* 1997. *Immunol. Rev.* 155:67.
 3. Hanke T, *et al.* 1999. *Immunity* 11:67.
 4. Mason LH, *et al.* 1996. *J. Exp. Med.* 184:2119.

Related Products:

Product	Clone	Application
Alexa Fluor® 647 Rat IgG2a, κ Isotype Ctrl	RTK2758	FC, ICFC
Cell Staining Buffer		FC, ICC, ICFC
RBC Lysis Buffer (10X)		FC, ICFC
TruStain fcX™ (anti-mouse CD16/32)	93	FC



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