

Alexa Fluor® 647 anti-mouse CD4 Antibody

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| Catalog# / Size | 100426 / 25 µg 100424 / 100 µg |
| Clone | GK1.5 |
| Regulatory Status | RUO |
| Other Names | L3T4, T4 |
| Isotype | Rat IgG2b, κ |
| Description | CD4 is a 55 kD protein also known as L3T4 or T4. It is a member of the Ig superfamily, primarily expressed on most thymocytes, a subset of T cells, and weakly on macrophages and dendritic cells. It acts as a coreceptor with the TCR during T cell activation and thymic differentiation by binding MHC class II and associating with the protein tyrosin kinase, lck. |

Product Details

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| Verified Reactivity | Mouse |
| Antibody Type | Monoclonal |
| Host Species | Rat |
| Immunogen | Mouse CTL clone V4 |
| Formulation | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. |
| Preparation | The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions. |
| Concentration | 0.5 mg/ml |
| Storage & Handling | The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze. |
| Application | FC - Quality tested IHC-F - Verified |
| 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 ≤ 0.25 µg per million cells in 100 µl volume. For immunohistochemistry of frozen tissue sections, a concentration range of 2.5-5 µg/ml is suggested. 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.

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| Excitation Laser | Red Laser (633 nm) |
| Application Notes | Additional reported applications (for the relevant formats) include: blocking of CD4 ⁺ T cell activation ^{1,4,11} , thymocyte costimulation ³ , <i>in vitro</i> and <i>in vivo</i> depletion ^{2,5-8} , blocking of egg-sperm cell adhesion ^{1,4} , immunohistochemical staining of acetone-fixed frozen sections ^{9,10} , immunoprecipitation ^{1,2} , and spatial biology (IBEX) ^{12,13} . The GK1.5 antibody is able to block CD4 mediated cell adhesion and T cell activation. Binding of GK1.5 antibody to CD4 T cells can be blocked by RM4-5 antibody, but not RM4-4 antibody. For <i>in vivo</i> studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100442) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin < 0.01 EU/µg). |

Application References

(PubMed link indicates BioLegend citation)

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2. Dialynas DP, *et al.* 1983. *Immunol. Rev.* 74:29. (IP, Deplete)
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Product Citations

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16. Simula L *et al.* 2018. *Cell reports.* 25(11):3059-3073 . [PubMed](#)
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20. Qi S, *et al.* 2020. *Theranostics.* 10:1814. [PubMed](#)
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RRID

AB_493519 (BioLegend Cat. No. 100426)
 AB_389324 (BioLegend Cat. No. 100424)

Antigen Details

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|---------------------------|--|
| Structure | Ig superfamily, 55 kD |
| Distribution | Majority of thymocytes, T cell subset |
| Function | TCR co-receptor, T cell activation |
| Ligand/Receptor | MHC class II molecule |
| Cell Type | Dendritic cells, T cells, Thymocytes, Tregs |
| Biology Area | Immunology |
| Molecular Family | CD Molecules |
| Antigen References | <ol style="list-style-type: none"> 1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press. 2. Bierer BE, <i>et al.</i> 1989. <i>Annu. Rev. Immunol.</i> 7:579. 3. Janeway CA. 1992. <i>Annu. Rev. Immunol.</i> 10:645. |
| Gene ID | 12504 |

Related Protocols

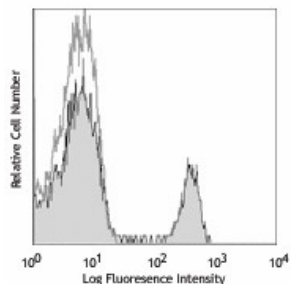
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

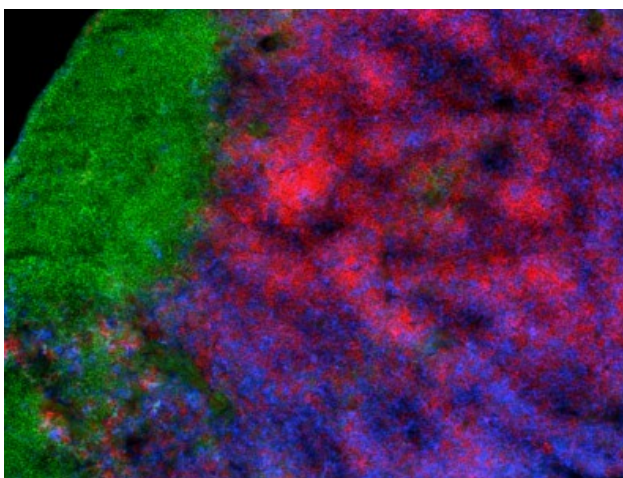
APC anti-mouse CD4, Biotin anti-mouse CD4, FITC anti-mouse CD4, PE anti-mouse CD4, PE/Cyanine5 anti-mouse CD4, Purified anti-mouse CD4, PE/Cyanine7 anti-mouse CD4, APC/Cyanine7 anti-mouse CD4, Alexa Fluor® 647 anti-mouse CD4, Alexa Fluor® 488 anti-mouse CD4, Pacific Blue™ anti-mouse CD4, Alexa Fluor® 700 anti-mouse CD4, PerCP anti-mouse CD4,

PerCP/Cyanine5.5 anti-mouse CD4, Brilliant Violet 421™ anti-mouse CD4, Ultra-LEAF™ Purified anti-mouse CD4, Alexa Fluor® 594 anti-mouse CD4, Brilliant Violet 711™ anti-mouse CD4, Brilliant Violet 510™ anti-mouse CD4, Brilliant Violet 605™ anti-mouse CD4, Brilliant Violet 785™ anti-mouse CD4, PE/Dazzle™ 594 anti-mouse CD4, APC/Fire™ 750 anti-mouse CD4, GoInVivo™ Purified anti-mouse CD4, Brilliant Violet 750™ anti-mouse CD4, Brilliant Violet 650™ anti-mouse CD4, Spark Blue™ 550 anti-mouse CD4, Spark NIR™ 685 anti-mouse CD4, KIRAVIA Blue 520™ anti-mouse CD4, PE/Fire™ 640 anti-mouse CD4, APC/Fire™ 810 anti-mouse CD4, PE/Fire™ 700 anti-mouse CD4, Spark Violet™ 538 anti-mouse CD4, Spark YG™ 593 anti-mouse CD4, Spark Blue™ 574 anti-mouse CD4 Antibody, Spark UV™ 387 anti-mouse CD4

Product Data



C57BL/6 mouse splenocytes were stained with CD4 (clone GK1.5) Alexa Fluor® 647 (filled histogram) or rat IgG2b, κ Alexa Fluor® 647 isotype control (open histogram).



C57BL/6 mouse frozen lymph node section was fixed with 4% paraformaldehyde (PFA) for 10 minutes at room temperature and blocked with 5% FBS plus 5% rat serum for 1 hour at room temperature. Then the section was stained with 5 µg/ml of CD8 (clone 53-6.7) Alexa Fluor® 594 (red), 5 µg/ml of CD4 (clone GK1.5) Alexa Fluor® 647 (blue), and 5 µg/ml of B220 (clone RA3-6B2) Alexa Fluor® 488 (green) overnight at 4°C. The image was captured by 10X objective.

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