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Anti-Mouse CD3 Antibody, Clone 17A2, PerCP-Cy5.5

Rat monoclonal antibody against mouse CD3, PerCP-Cy5.5-conjugated

Catalog #100-1608 | 100 µg | 0.2 mg/mL

Product Description

This monoclonal antibody reacts with the mouse cluster of differentiation 3 (CD3) complex, which consists of epsilon, gamma, delta, and zeta polypeptide chains. CD3 is a member of the immunoglobulin superfamily and is primarily expressed on T cells, NK-T cells, and at different levels on thymocytes during T cell differentiation. CD3 protein chains assemble with chains of T cell receptor (TCR) and together they form the TCR-CD3 complex. TCR-CD3 complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. This complex is critical for T cell development and function, and it represents one of the most complex transmembrane receptors. Blocking studies using a CD3E-targeting antibody suggests that the 17A2 clone of CD3 antibody recognizes an epitope on the epsilon chain of the CD3 complex. The 17A2 antibody clone is widely used as a phenotypic marker for mouse T cells. In addition, as the CD3E chain within the TCR-CD3 complex contains intracellular signaling domains, binding of the 17A2 antibody clone to CD3 can induce cell activation.

Target Antigen:	CD3
Alternative Names:	CD3 epsilon, T3 complex, T cell antigen receptor complex
Gene ID:	12501
Species Reactivity:	Mouse
Host Species:	Rat
Clonality:	Monoclonal
Clone:	17A2
Isotype:	IgG2b, kappa
Immunogen:	γδ TCR-positive T-T hybridoma D1
Conjugate:	PerCP-Cy5.5 (Peridinin chlorophyll protein complex-Cyanine5.5)

Applications

Verified Applications:	FC
Reported Applications:	FC

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; FCXM: Flow cytometric crossmatch assay; FISH: Fluorescence in situ hybridization; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IHC-F: Immunohistochemistry (frozen-tissue); IHC-P: Immunohistochemistry (paraffin-embedded); IP: Immunoprecipitation; NMR: Nuclear magnetic resonance spectroscopy; RIA: Radioimmunoassay; WB: Western blotting

Properties

Product Formulation:	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.1% gelatin
Purification:	The antibody was purified by affinity chromatography and conjugated with PerCP-Cy5.5 under optimal conditions. The solution is free of unconjugated PerCP-Cy5.5.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. Stable until expiry date (EXP) on label.
Directions for Use:	For flow cytometry, the suggested use of this antibody is ≤ 1 µg per 1 x 10^6 cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies, or contact us at techsupport@stemcell.com.

References

Angsana J et al. (2015) Syndecan-1 modulates the motility and resolution responses of macrophages. Arterioscler Thromb Vasc Biol 35(2): 332–40.
Bas A et al. (2011) Butyrophilin-like 1 encodes an enterocyte protein that selectively regulates functional interactions with T lymphocytes. Proc Natl Acad Sci U S A 108(11): 4376–81.
Fernandes RA et al. (2012) T cell receptors are structures capable of initiating signaling in the absence of large conformational rearrangements. J Biol Chem 287(16): 13324–35.
Joetham A et al. (2020) Dichotomous role of TGF-β controls inducible regulatory T-cell fate in allergic airway disease through Smad3 and TGF-β–activated kinase 1. J Allergy Clin Immunol 145(3): 933–46.
Li SX et al. (2019) Gut microbiota from high-risk men who have sex with men drive immune activation in gnotobiotic mice and in vitro HIV infection. PLoS Pathog 15(4): e1007611.
Mairhofer DG et al. (2015) Impaired gp100-specific CD8+ T-cell responses in the presence of myeloid-derived suppressor cells in a spontaneous mouse melanoma model. J Invest Dermatol 135(11): 2785–93.
Miescher GC et al. (1989) Production and characterization of a rat monoclonal antibody against the murine CD3 molecular complex. Immunol Lett 23(2): 113–8.
Ocaña-Guzmán R et al. (2022) Murine RAW macrophages are a suitable model to study the CD3 signaling in myeloid cells. Cells 11(10) :1635.
Xiang G et al. (2022) UBR5 targets tumor suppressor CDC73 proteolytically to promote aggressive breast cancer. Cell Death Dis 13(5): 451.