TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT WWW.STEMCELL.COM

Anti-Human CD3 Antibody, Clone SK7, APC

Mouse monoclonal antibody against human, chimpanzee CD3, APC-conjugated

Catalog #100-1591 100 Tests 5 µL/test

Product Description

This monoclonal antibody reacts with the ~20 kDa cluster of differentiation 3 epsilon (CD3ε) subunit of human T cell receptor (TCR)/CD3 complex, which is expressed on the surface of ~95% of mature T cells and natural killer T cells, and variably on thymocytes. A majority of T cell neoplasms also express CD3. The CD3 complex consists of subunits γ, δ, ε, η, and ζ and binds noncovalently with the TCR. It is involved in transducing antigen recognition signals into the cytoplasm of T cells and in regulating expression of the TCR on cell surfaces. Activation of T cells by the TCR involves the cytoplasmic tails of the CD3 subunits, which are structurally related to type 1 transmembrane proteins and members of the immunoglobulin superfamily. Mutations in the CD3 subunits have been associated with various immunodeficiency disorders including severe combined immunodeficiency (SCID).

Target Antigen:	CD3
Alternative Names:	CD3e, CD3epsilon, Leu4, T3
Gene ID:	916
Species Reactivity:	Human, Chimpanzee
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	SK7
Isotype:	IgG1, kappa
Immunogen:	Human thymocytes
Conjugate:	APC (Allophycocyanin)

Applications

Verified Applications:	FC
Reported Applications:	FC, FCXM
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ Human Naïve Pan T Cell Isolation Kit (Catalog #17961).

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 APC under optimal conditions. The solution is free of unconjugated APC.
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

Beverley PCL & Callard RE. (1981) Distinctive functional characteristics of human T lymphocytes defined by E rosetting or a monoclonal anti-T cell antibody. Eur J Immunol 11(4): 329–34.
Chi CY et al. (2013) Anti–IFN-γ autoantibodies in adults with disseminated nontuberculous mycobacterial infections are associated with HLA-DRB1*16:02 and HLA-DQB1*05:02 and the reactivation of latent varicella-zoster virus infection. Blood 121(8): 1357–66.
Claireaux M et al. (2018) A high frequency of HIV-specific circulating follicular helper T cells is associated with preserved memory b cell responses in HIV controllers. mBio 9(3): e00317–8.
Haringman JJ et al. (2005) Reliability of computerized image analysis for the evaluation of serial synovial biopsies in randomized controlled trials in rheumatoid arthritis. Arthritis Res Ther 7(4): R862–7.
Lanier LL et al. (1986) Correlation of cell surface antigen expression on human thymocytes by multi-color flow cytometric analysis: implications for differentiation. J Immunol 137(8): 2501–7.
Liwski RS et al. (2017) Rapid optimized flow cytometric crossmatch (FCXM) assays: The Halifax and Halifaster protocols. Hum Immunol 79(1): 28–38.
Soto PC et al. (2010) relative over-reactivity of human versus chimpanzee lymphocytes: implications for the human diseases associated with immune activation. J Immunol 184(8): 4185–95.
Williams DW et al. (2021) Human oral mucosa cell atlas reveals a stromal-neutrophil axis regulating tissue immunity. Cell 184(15): 4090–104.
Wrann CD et al. (2012) Short-term and long-term leptin exposure differentially affect human natural killer cell immune functions. Am J Physiol Endocrinol Metab 302(1): 108–16.