Bi-Test™ CD3 FITC - CD16 & 56 PE

Product: Anti-human CD3 FITC T cell Monoclonal Antibody and CD16 & 56 PE NK Lymphocytes Monoclonal Antibodies.

Description: The CD3 epitope is expressed on the epsilon chain of the CD3/T cell antigen receptor (TcR) complex. CD3 is present on 65-85% of thymocytes and has a mitogenic effect on peripheral blood T cells. Identification of human T cells expressing the 22-28,000 M.W. surface antigen. CD16 identifies human NK cell antigen expressing the 50 - 70 kDa M.W. surface antigen associated with the IgG Fc receptor III on NK cells and Neutrophils. CD16 is expressed on approximately 15% of peripheral blood lymphocytes and is present on all resting NK cells. CD16 may be expressed on CD3 T cells from certain individuals. CD56, M.W.150,000 is expressed on approximately 10-25% of human peripheral blood lymphocytes. CD56 (NKH-1) is expressed on human peripheral blood natural killer cells, representing a pan NK-cell antigen. Expressed on non-MHC-restricted cytotoxic T cells.

Isotypes: Mouse IgG1 kappa (FITC), Mouse IgG1 kappa (PE) and Mouse IgG2b kappa (PE)

Clones: M2AB (CD3 FITC), J5511 (CD16 PE) and C5.9 (CD56 PE)

Applications: Monitoring of T cells subsets in peripheral blood; Characterization of subtypes of T cell leukemia's and lymphomas; Studies of AIDS/HIV virus infection; Analysis of CD3 complex related to the T cell antigen receptor; Study of resting and activated NK cells; Study of non-MHC restricted cytotoxic T cells; Study of T cell differentiation in early thymocytes; Monotoring of NK cell subsets in peripheral blood; Analysis of NK cell levels in peripheral blood.

Use: PBMC: Add10 µl of MAB/10^6 PBMC in 100 µl PBS. Mix gently and incubate for 15 minutes at 2^{o} to 8^{o}C. Wash twice with PBS and analyze or fix with 0.5% v/v of paraformaldehyde in PBS and analyze.
WHOLE BLOOD: Add10 µl of MAB/100 µl of whole blood. Mix gently and incubate for 15 minutes at room temperature 20^{o}C. Lyse the whole blood. Wash once with PBS and analyze or fix with 0.5% v/v of paraformaldehyde in PBS and analyze. See instrument manufacturer's instructions for Lysed Whole Blood and Immunofluorescence analysis with a flow cytometer or microscope.

Storage: Antibodies are supplied in PBS, 0.08% sodium azide and 0.2% protein carrier for FITC and PE. Antibodies should be stored at 4-8^{o}C. Monoclonal antibodies should not be frozen. Reagents are stable for the period shown on the vial label when stored properly.

Ordering Information:	**Form**	**Vial Size**	**Catalog #**
	Bi-Test™	50 Test1	1656S
	Bi-Test™	100 Test	1656

For research use only. Not for use in human diagnostics or therapeutics.

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REFERENCES:

1. Knowles RW. Immunochemical analysis of the T cell-specific antigens. In : Reinhert EL, Haynes BF, Nadl LM and Bernstein ID. eds. Leukocyte Typing II, Human T Lymphocytes. New York, NY: Springer-Verlag; 1986:259

2. Kurrle R. Cluster Report:CD3. In:Knapp W, Dorken B, Gilks WR, Reiber EP, Schmidt RE, Stein H, and von dem Borne AEG Kr, eds. Leukocyte Typing IV, White cell Differentation Antigens. Oxford, England: Oxford Press 1989:293

3. Signal transduction via CD4,CD8 and CD28 in mature and immature thymocytes. Implications for thymic selection. Turka LA, Linsley PS, Paine R 3d, Schieven GI, Thompson GB, Ledbetter JA, J. Immunol. 1991 Mar :146(5): 1428-36

4. T cell receptor/CD3-signaling induces death by apoptosis in human T cell receptor gamma delta + Tcells. Janssen O, Wesselborg S, Heckl-Ostreicher B, Pechhold K, Bender A, Schondelmaier S, Moldenhauer G, Kabelitz D I Immunol. 1991 Jan146(1):35-9

5. Clonal analysis of human CD4-CD8-CD3- thymocytes highly purified from postnatal thymus Hori T, Spits H J. Immunol. 1991 Apr 146(7):2116-21

6. Molecular cloning of the CD3 zeta subunit identifies a CD3 zeta-related product in thymus-derived cells Jin YJ, Claton LK, Howard FD, Koyasu S, Sieh M, Steinbrich R, Tarr GE, Reinherz EL. Proc Natl Acad Sci usa 1990 Ma: 87(9):3319-23

7. Generation of Monoclonal Antibodies to a Human Natural Killer Clone. Characterization of Two Natural Killer-Associated Antigens, NKH1 and NKH2, Expressed on Subset of Large Granular Lymphocytes. Hercend T, Griffin JD, Benussan A, Schmidt RE, Edson MA, Brennen A, Murray C, Daley JF, Schlossman SF, and Ritz, J, J. Clin. Invest. 1985 75:932

8. The relationship of CD16 (Leu-11) and Leu-19 (NKH-1) Antigen Expression on Human Peripheral Blood Nk Cells and Cytotoxic T Lymphocytes. Lanier LL, Le AM, Civin CI, Loken MR, and Phillips JH, J. Immunol. 1986 136,4480

9. Hercend T, and Schmidt RE, Immunol. Today 9,291,1988

10. CD16 on human gamma delta T lymphocytes: expression, function, and specificity for mouse IgG isotypes. Braakman E; van de Winkel JG; van Krimpen BA; Jansze M; Bolhuis RL Cell Immunol 1992 Aug;143(1):97-107

11. Fc gamma RIII activation is different in CD16+ cytotoxic T lymphocytes and natural killer cells. Uciechowski P; Gessner JE; Schindler R; Schmidt RE Eur J Immunol 1992 Jun;22(6):1635-8

12. Involvement of a metalloprotease in spontaneous and phorbol ester-induced release of natural killer cell-associated Fc gamma RIII (CD16-II). Harrison D; Phillips JH; Lanier LL J Immunol 1991 Nov 15;147(10):3459-65

13. CD16- CD56+ natural killer cells after bone marrow transplantation. Jacobs R; Stoll M; Stratmann G; Leo R; Link H; Schmidt RE Blood 1992 Jun 15;79(12):3239-44

14. Natural killer function in flow cytometry: identification of human lymphoid subsets able to bind to the NK sensitive target K562. Vitale M; Zamai L; Neri LM; Manzoli L; Facchini A; Papa S Cytometry 1991;12(8):717-22

15. In vitro responsiveness to interleukins and theophylline of CD16+, CD56- natural killer cells in a patient with chronic granular lymphocyte disorder. Bayle C; Vitte-Mony I; Lang P; Pico J; Hercend T; Bertoglio J Leukemia 1992 May;6(5):470-6

16. Signal transduction by Fc gamma RIII (CD16) is mediated through the gamma chain. Wirthmueller U; Kurosaki T; Murakami MS; Ravetch JV J Exp Med 1992 May 1;175(5):1381-90

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