



Bi-Test™ CD8 FITC - CD28 PE

Product: Anti-human T and NK Lymphocytes and CD28 receptor monoclonal antibody.

Description: Identification of human cytotoxic/suppressor T cells expressing the 32 and 43,000 M.W. surface antigen. CD38 antigen is an integral membrane glycoprotein, M.W. 45 kD. Anti-human CD28 binds the 44kDa MW cell surface protein on the surface of most T cells. CD28 acts as the ligand for the B7/BB-1 molecule on the surface of activated B cells. B7/BB-1 co-stimulates T cells through CD28, along with CD2 and CD3. CD28 antigen is a disulfide-linked homodimeric glycoprotein. The CD28 antigen is present on approximately 60%-80% T lymphocytes (95% of CD4 and 50% of CD8 lymphocytes). CD28 regulates the expression of cytokines by T cells, not only IL-2, but also IL-1 alpha and CSF-1, usually synthesized by accessory cells. CD28 functions as a cell adhesion molecule (CAM) for certain T cell subsets.

Isotype: Mouse IgG1 kappa and IgG1 kappa.

Clones: 17D8(CD8 FITC) and B-23 (CD28 PE).

Applications: Monitoring of activated T cell subsets in peripheral blood; Characterization of subtypes of T cell leukemias and lymphomas; Study of T lymphocyte cytokine function; Study of B cell activation; Analysis of NK cells subsets; Study of B cell activation; Study of cell mediated cytotoxicity; Study of Cell-adhesion molecules relating to T & B lymphocytes.

Use: PBMC: Add 10 µl of MAB/10⁶ PBMC in 100 µl PBS. Mix gently and incubate for 15 minutes at 2^o to 8^oC. Wash twice with PBS and analyze or fix with 0.5% v/v of paraformaldehyde in PBS and analyze. WHOLE BLOOD: Add 10 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^oC. Mabs 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 Tests	0828S
	Bi-Test	100 Tests	0828

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

REFERENCES:

1. Evolutionary Conservation of Surface Molecules that Distinguish T Lymphocyte Helper/Inducer and T Cytotoxic/Suppressor Subpopulations in Mouse and Man. Ledbetter, J.A., Evans, R.L., Lipinski, M., Cunningham-Rundles, C., Good, R.A. and Herzenberg, L.A., J. Exp. Med. 153, 310, 1981.
2. Circulating Antigen-Specific Suppressor T Cells in a Healthy Woman: Mechanism of Action and Isolation with a Monoclonal Antibody. Engleman, E.G., Benike, C.J., and Evans, R.L., Clin. Res. 29, 365a 1981.
3. Induction of Immunoglobulin Secreting Cells in the Allogeneic Mixed Leukocyte Reaction: Regulation by Helper and Suppressor Lymphocyte Subsets in Man. Kotzin, B.L., Benike, C.J. and Engleman, E.G., J. Imm. 127, 931, 1981.
4. CD4 and CD8 molecules can physically associate with the same T-cell receptor. Gallagher, P.F., Fazekas de St. Groth, B., Miller, J.F.A.P., Proc. Nat. Acad. Sci. 1989, 86:10044.
5. Immunofluorescence Measurement in a Flow Cytometer using Low-Power Helium Neon Laser Excitation. Shapiro, H.M, Glazer, A.N., Christenson, L., Williams, J.M., and Strom, T. B. Cytometry 4, 276, 1983.
6. Comparison of Helium Neon and Dye lasers for Excitation of Allophycocyanin. Loken, M.R., Kiej, J.F. and Kelly, K., A. Cytometry 8, 96, 1987.
7. CD28 is an inducible T cell surface antigen that transduces a proliferative signal in CD3+ mature thymocytes. Turka LA; Ledbetter JA; Lee K; June CH; Thompson CB J Immunol 1990 Mar ;144(5):1646-53
8. CD28 ligation in T-cell activation: evidence for two signal transduction pathways. Ledbetter JA; Imboden JB; Schieven GL; Grosmaire LS; Rabinovitch PS; Lindsten T; Thompson CB; June CH Blood 1990 Apr ;75(7):1531-9
9. T-cell antigen CD28 mediates adhesion with B cells by interacting with activation antigen B7/BB-1. Linsley PS; Clark EA; Ledbetter JA Proc Natl Acad Sci U S A 1990 Ju;87(13):5031-5
10. Role of the CD28 receptor in T-cell activation. June CH; Ledbetter JA; Linsley PS; Thompson CB Immunol Today 1990 Ju;11(6):211-6
11. Differences in surface phenotype and mechanism of action between alloantigen-specific CD8+ cytotoxic and suppressor T cell clones. Koide J; Engleman EG J Immunol 1990 Jan ;144(1):32-40
12. Binding of the B cell activation antigen B7 to CD28 costimulates T cell proliferation and interleukin 2 mRNA accumulation. Linsley PS; Brady W; Grosmaire L; Aruffo A; Damle NK; Ledbetter JA J Exp Med 1991 Mar ;173(3):721-30 13
13. The CD28 ligand B7/BB1 provides costimulatory signal for alloactivation of CD4+ T cells. Koulova L; Clark EA; Shu G; Dupont B J Exp Med 1991 Mar ;173(3):759-62

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

Exalpa Biologicals, Inc., 86 Rosedale Rd. Watertown, MA 02472
Tel: 800.395.1137 or 617.924.3400, Fax: 866.924.5100 or 617.924.5100, Web: www.exalpa.com