

PN IM2724 CD26-PE

(4EL-1C7)

**100 tests
20 µL / test**



IO Test®
Conjugated Antibodies

For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

The CD26 antigen is the dipeptidylpeptidase IV ectoenzyme (DPP-IV) (1, 2). It is a single-chain glycoprotein with a molecular weight of 110 kDa. It binds to adenosine deaminase protein (ADA) (3). CD26 provides an alternative activation pathway for T lymphocytes in which the CD3ζ (TCRζ chain) is required for CD26-mediated signaling (4). The expression of CD26 is found on resting T cells and is increased on activated T lymphocytes, B lymphocytes and NK cells (1, 5, 6).

4EL-1C7 (also designated anti-Ta1) corresponds to the original clustered CD26 monoclonal antibody at the 2nd International Workshop on Human Leucocyte Differentiation Antigens in Boston, USA, in 1984 (7). This antibody does not inhibit IL-2-induced T cell proliferation and T cell-mediated cytotoxicity (5).

In a study using this antibody, it has been suggested that CD26 is involved as a cofactor of CD4 in the mechanism of triggering apoptosis by the HIV gp120/gp41 complex (8). Another study showed the expression of CD26 in human kidney and on lymphocytes and macrophages of lepromatous and tuberculoid skin biopsies (9).

REAGENT

Clone 4EL-1C7
Isotype IgG1κ, mouse
Immunogen Human T cells
Hybridoma NS-2/AG4 x Balb/cJ
Source Ascites fluid
Purification Ion exchange or affinity chromatography
Conjugation R-phycoerythrin (PE) is conjugated at 0.7 – 1.5 mole of PE per mole of Ig
Excitation wavelength: 488 nm
Maximum emission wavelength: 575 nm
Main emission color: Orange-red

Buffer 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

APPLICATION

Flow cytometry (5, 6, 10).

STATEMENT OF WARNINGS

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.

4. Do not use reagent beyond the expiration date on the vial label.
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagent or erroneous results may occur.
7. Use Good Laboratory Practices (GLP) when handling this reagent.

STORAGE CONDITIONS AND STABILITY

Each reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. Minimize exposure to light.

REAGENT PREPARATION

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 20 – 25°C prior to use.

PROCEDURE

This reagent is designed for flow cytometry.

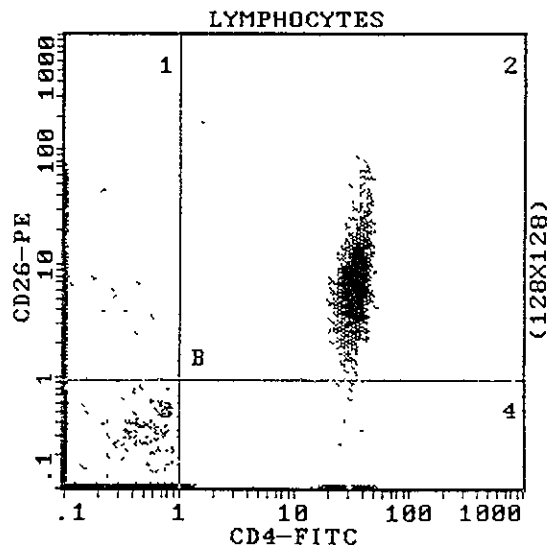
Assay volume: 20 µL per 5 x 10⁵ cells in one test, or per 100 µL whole blood.

A wash is required to yield optimal results.

EXAMPLE DATA

The graphs below are biparametric representations (fluorescence intensity versus fluorescence intensity) of a lysed normal whole blood sample. Staining is with a combination of 2 reagents, CD4-FITC and CD26-PE (PN IM0448 and PN IM2724, respectively). The gating is done on lymphocytes.

Figure 1: Acquisition is with a COULTER® EPICS® XL flow cytometer. Analysis is with the XL SYSTEM II™ software.



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PARTNERS IN CELL ANALYSIS


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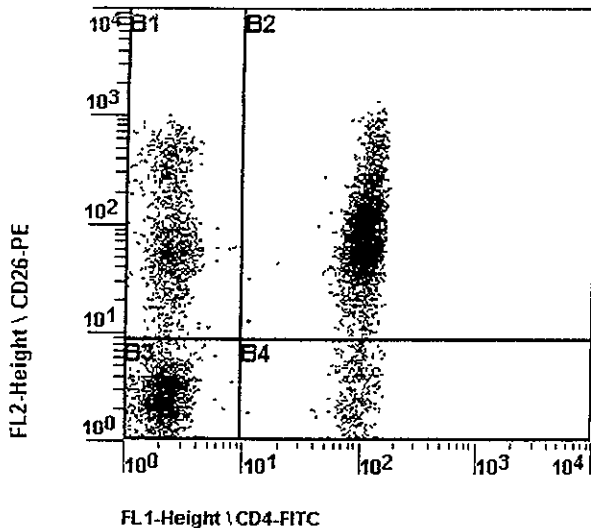
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Figure 2: Acquisition is with a Becton Dickinson FACScan™ flow cytometer equipped with the LYSYS II™ software. Analysis is with EXPO™ (v 2.0) Cytometer software (Coulter PN 6605434).



SELECTED RESEARCH REFERENCES

- [4900] Hegen, M., "CD26 Workshop panel report", Leucocyte Typing VI, White Cell Differentiation Antigens, Kishimoto, T., et al., Eds., Garland Publishing, Inc., 478-481.
- [4481] Ansorge, S., Buhling, F., Kähne, T., Lendenckel, U., Reinhold, D., Tager, M., Wrenger, S., "CD26/dipeptidyl peptidase IV in lymphocyte growth regulation", 1997, Cellular peptidases in immune functions and diseases, Ansorge and Langner, Eds., Plenum Press, New York, 127-140.
- [4899] Hegen, M., Dong, R-P, Levine, H.B., Morimoto, C, Schlossman, S.F., "CD26 Workshop Mapping of the adenosine deaminase binding region and epitopes of anti-CD26 antibodies and their functional properties in human T-cell activation", Leucocyte Typing VI, White Cell Differentiation Antigens, Kishimoto, T., et al., Eds., Garland Publishing, Inc., 482-483.
- [4477] Mittrucker, H-W., Steeg, C., Malissen, B, Fleischer, B, "The cytoplasmic tail of the T-cell receptor chain is required for signaling via CD26", 1995, Eur J. Immunol., 25, 295-297.
- [2415] Fox, D.A., Hussey, R.E., Fitzgerald, K.A, Acuto, O., Poole, C., Palley, L., Daley, J.F, Schlossman, S.F., Reinherz, E.L., "Ta1, a novel 105 KD human T-cell activation antigen defined by a monoclonal antibody", 1984, J. Immunol., 3, 133, 1250-1256.
- [3955] Brezinschek, R.I., Lipsky, P.E., Galea, P., Vita, R., Oppenheimer-Marks, N., "Phenotypic characterization of CD4+ T-cells that exhibit a transendothelial migratory capacity", 1995, J. Immunol., 154, 3062-3077.
- [212] Knowles, R.W., "Immunochemical analysis of the T-cell - specific antigens", 1985, Leucocyte Typing II, 1, Human T lymphocytes, Reinherz, E.L., et al., Eds., Springer-Verlag, 260-288.
- [2915] Jacotot, E., Callebaut, C., Blanco, J., Rivière, Y., Krust, B, Hovanessian, A.G., "HIV envelope glycoprotein-induced cell killing by apoptosis is enhanced with increased expression of CD26 in CD4+ T-cells", 1996, Virology, 0483, 223, 318-330.
- [4901] Seitzer, U., Schell-Toellner, D., Mattern, T., Flad, H.D., Gerdes, J., "CD26 Workshop . comparison of non-lineage anti-CD26 antibodies in their reactivity with lepromatous tissue : staining pattern and correlation with TH1-like reaction", Leucocyte Typing VI, White Cell Differentiation Antigens, Kishimoto, T., et al., Eds., Garland Publishing, Inc., 488-489.
- [2414] Lanier, L.L., "Analysis on the Workshop T-cell monoclonal antibodies by indirect two color immunofluorescence and multiparameter flow cytometry", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, McMichael A J., et al., Eds., Oxford University Press, 62-65.

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