

**CYTO-STAT®/
COULTER CLONE®
T4-ECD**

REF 6604727 - 50 tests

PN 4236238-D



ANALYTE SPECIFIC REAGENT

Analytical and performance characteristics are not established.

ANTIBODY SPECIFICITY

The CD4 antigen has a molecular weight of 59 kD.¹⁻³ It is present on thymocytes and the inducer T lymphocyte population in peripheral blood.^{2,4} It is also expressed at low density on monocytes.⁵ The CD4+ lymphocytes play a central role in regulating the immune response.^{6,7} In peripheral blood, the CD4+ lymphocytes provide an inducer function for T-T, T-B, and T-macrophage interaction.^{8,9} The CD4 antigen reacts with the class II major histocompatibility complex (MHC) antigen on target cells.²

REAGENT

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PN 6604727 - 50 tests (0.5 mL)

CLONE: SFC112T4D11 (T4) was derived from the hybridization of mouse NS-1 myeloma cells with spleen cells from BALB/c mice immunized with peripheral human T lymphocytes.¹⁰

Ig CHAIN: Mouse IgG1 heavy chain and kappa light chains

SOURCE: Conditioned media

PURIFICATION: Affinity Chromatography

CONJUGATION: T4-ECD (Energy Coupled Dye, Phycoerythrin-Texas Red)

MOLAR RATIO: ECD/protein 0.5-1.5

FLUORESCENCE:
ECD (Red) Excites at 486-580 nm
Emits at 610-635 nm

REAGENT CONTENTS

The concentration of nonantibody reagents is 0.2% BSA, 0.01 M potassium phosphate, 0.15 M NaCl, 0.1% Na₂S₂O₃ and stabilizers.

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 vial label.
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagents or erroneous results may occur.
7. Use Good Laboratory Practices (GLP) when handling this reagent.
8. Harmful if swallowed.
9. After contact with skin, wash immediately with plenty of water.

STORAGE CONDITIONS AND STABILITY

This reagent is stable to the expiration date on the vial label when stored at 2-8°C. Do not freeze. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this reagent (clear colorless to pinkish liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

REAGENT PREPARATION

No preparation is necessary. This CYTO-STAT/COULTER CLONE reagent is used directly from the vial.

Bring reagent to 20-25°C prior to use.

USAGE

This reagent is for use with standard flow cytometry methodologies.

The use of CD4-ECD in this reagent is not intended for the enumeration of CD4 cells in clinical diagnostic applications.

SELECTED RESEARCH REFERENCES

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2. Reinherz EL, Meuer SC and Schlossman SF. 1983. The delineation of antigen receptors on human T lymphocytes. *Immunol Today* 4:5-8.
3. Shaw S. 1994. *Leukocyte Differentiation Antigen Database (LDAD)*. Ver 1.10 National Institute of Health Fifth International Workshop on Leukocyte Differentiation Antigens.
4. Reinherz EL, Morimoto C, Fitzgerald KA, Hussey RE, Daley JF and Schlossman SF. 1982. Heterogeneity of human T4+ inducer T cells defined by a monoclonal antibody that delineates two functional subpopulations. *J Immunol* 128:463-468.
5. de Martini RM and Parker JW. 1989. Immunologic alterations in human immunodeficiency virus infection: A review. *J Clin Lab Anal* 3:56-70.
6. Morimoto C, Letvin NL, Distaso JA, Aldrich WR and Schlossman SF. 1985. The isolation and characterization of the human suppressor inducer T cell subset. *J Immunol* 134:1508-1515.
7. Morimoto C, Letvin NL, Distaso JA, Brown HM and Schlossman SF. 1986. The cellular basis for the induction of antigen-specific T8-suppressor cells. *Eur J Immunol* 16:198-204.
8. Meuer SC, Schlossman SF and Reinherz EL. 1982. Clonal analysis of human cytotoxic T lymphocytes: T4+ and T8+ effector T cells recognize products of different major histocompatibility regions. *Proc Natl Acad Sci USA* 79:4395-4399.

9. Reinherz EL, Kung PC, Goldstein G and Schlossman SF. 1979. A monoclonal antibody with selective reactivity with functionally mature human thymocytes and all peripheral human T cells. *J Immunol* 123:1312-1317.
10. Reinherz EL, Haynes BF, Nadler LM and Bernstein ID. 1986. *Leukocyte Typing II*. New York, NY: Springer-Verlag, Vol 2: pp. 8,15-25.

PRODUCT AVAILABILITY


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ECD is licensed under patent 4,520,104.

For additional information or if damaged product is received in the USA, call 800-526-7694. Outside the USA, contact your local Beckman Coulter Representative.

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