

COULTER CLONE® CD3 (IgG1)

REF A83481 - 100 tests

PN A83487-AA



	CD3 (IgG1)
Specificity	CD3
Clone	UCHT1
Hybridoma	P3/NS1/1-AG4-1 x BALB/c
Immunogen	Human infant thymocytes and peripheral blood lymphocytes from a patient with Sezary cell leukemia. ⁷
Ig Chain	IgG1 ^{1,7}
Species	Mouse
Source	Conditioned Medium
Purification	Affinity Chromatography
Fluorescence	Non Applicable
Conjugation	Non Applicable
Molar Ratio	Non Applicable
Scatter Detection	Forward and/or side

ANALYTE SPECIFIC REAGENT

Analytical and performance characteristics are not established.

ANTIBODY SPECIFICITY

The CD3 antigen consists of two glycoproteins with molecular weights of 20 and 25 kd.¹ It is a lineage-specific 'pan T cell' surface antigen and normally is present on mature thymocytes, resting and activated peripheral T lymphocytes (both inducer and suppressor/ cytotoxic populations).^{1,4} It is not detected on peripheral blood B lymphocytes, monocytes, granulocytes or platelets.¹ Surface expression of the CD3 antigen is preceded by its occurrence in the cytoplasm of immature and common thymocytes. The CD3 antigen forms a complex with the T lymphocyte receptor (referred to as CD3/Ti or CD3/TCR complex) and is required for transduction of the activation signal for T lymphocyte proliferation after antigen-specific recognition by the Ti (or TCR).^{1,5,6} The CD3 (IgG1) antibody is mitogenic to peripheral blood T lymphocytes.¹

REAGENT

See table above.

REAGENT CONTENTS

The antibody concentration is 2.0 µg/test.

The final concentration of nonantibody reagents when reconstituted is 0.2% BSA, 0.01 M potassium phosphate, 0.15 M NaCl and 0.1% NaN₃.

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 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

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

Reconstituted stock solution lyophilized reagent is stable as follows:

- 6 months when stored at 2-8°C or 0 to -20°C when reconstituted using the Reconstitution Procedure described in the REAGENT PREPARATION section. If all of a reconstituted reagent is not to be used within 6 months, follow the Freezing Procedure.
- 1 year when stored at -70°C using the Freezing Procedure.

FREEZING PROCEDURE

MATERIALS REQUIRED BUT NOT SUPPLIED

PBS - Phosphate Buffered Saline (pH=7.2) PN 6603369
PBS containing 2% heat-inactivated fetal or newborn calf serum (FCS). Dilute 2 mL of calf serum to 100 mL with PBS.

1. Dilute the reconstituted stock solution of the COULTER CLONE reagent with PBS containing 2% FCS prior to freezing as follows:

Add 5 µL of reconstituted stock solution (1 test*) to 100 µL PBS with 2% FCS**.
*These may be frozen in multiple test volume aliquots.
**This yields 2x the concentration of the working solution.
2. Prior to use, allow the frozen aliquot to reach 20-25°C.
3. The frozen aliquot, at 2x the final concentration, must be further diluted to equal the total volume as calculated in the REAGENT PREPARATION section. Dilute each aliquot with the appropriate volume of PBS without 2% FCS and mix well.
4. Avoid repeated freeze/thaw cycles. This will denature the antibody protein.
5. Do not store in a self-defrosting freezer.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this reagent*, or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used. If the lyophilized material appears moist, do not use.

*Normal Appearance of Reagent

Purified: Lyophilized-white plug
Reconstituted - clear, colorless liquid

REAGENT PREPARATION

Reconstitute the lyophilized COULTER CLONE CD3 (IgG1) reagent by adding 500 µL of distilled water to the vial. This is the stock solution. Centrifuge the stock solution at 20-25°C at 100,000 x g for 10 minutes to optimize staining results. Use this liquid reagent directly from the vial as the stock solution. The reagent working solution* is prepared as follows (volume listed is on a per test basis):
Add 5 µL stock solution to 195 µL PBS**.

*Diluted reagent working solution is good for day of preparation only.

**PBS - Phosphate Buffered Saline (pH=7.2).

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

USAGE

This reagent is for use with standard fluorescence microscopy and/or flow cytometry methodologies.

The use of CD3 (IgG1) in this reagent is not intended for enumeration of CD3 cells in clinical diagnostic applications.

SELECTED RESEARCH REFERENCES

1. McMichael AJ, ed: 1987. Leukocyte Typing III. Oxford University Press. p. 38, 40, 42, 43, 116, 167, 170-172, 176, 199, 302-308, 315, 475.
2. Bernard A, Bousmell L, Dausset J, Milstein C and Schlossman SF, eds: 1984. Leukocyte Typing. New York: Springer-Verlag. p. 28, 41-42, 196.
3. Reinherz EL and Schlossman SF:1980. The differentiation and function of human T lymphocytes. Cell 19: 821-827.
4. Caligiuri M, Murray C, Buchwald D, Levine H, Cheney P, Peterson D, Komaroff AL and Ritz J: 1987. Phenotypic and functional deficiency of natural killer cells in patients with chronic fatigue syndrome. J Immunol 139: 3306-3313.
5. Reinherz EL, Meuer S, Fitzgerald KA, Hussey RE, Levine H and Schlossman SF: 1982. Antigen recognition by human T lymphocytes is linked to surface expression of the T3 molecular complex. Cell 30: 735-743.
6. Meuer SC, Acuto O, Hussey RE, Hodgdon JC, Fitzgerald KA, Schlossman SF and Reinherz EL:1983. Evidence for the T3-associated 90K heterodimer as the T-cell antigen receptor. Nature 303: 808-810.
7. Beverly PCL and Callard RE: 1981. Distinctive functional characteristics of human "T" lymphocytes defined by E rosetting or a monoclonal anti-T cells antibody. Eur J Immunol 11: 329-334.

PRODUCT AVAILABILITY

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