

**CYTO-STAT®/
COULTER CLONE®
4B4-FITC,
4B4-RD1**

6604105 - 50 tests

6604159 - 50 tests

PN 4235995-F



	CLONE 1	CLONE 2
Specificity	CD29	CD29
Clone	4B4LDC9LDH8	4B4LDC9LDH8
Hybridoma	NS-1 x BALB/c	NS-1 x BALB/c
Immunogen	T lymphocyte line derived from <i>Saguinus oedipus</i>	T lymphocyte line derived from <i>Saguinus oedipus</i>
Ig Chain	IgG1	IgG1
Species	Mouse	Mouse
Source	Ascites fluid	Ascites fluid
Purification	Affinity chromatography	Affinity chromatography
Fluorescence	Excites at 468-509 nm / Emits at 504-541 nm	Excites at 486-580 nm / Emits at 568-590 nm
Conjugation	FITC (Fluorescein Isothiocyanate)	RD1 (Phycoerythrin)
Molar Ratio	FITC/Protein: 3-10	RD1/Protein: 0.5-1.5

MONOCLONAL ANTIBODY

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

ANTIBODY SPECIFICITY

The 4B4 antibody recognizes the CD29 antigen, which has a molecular weight of 134 kD. This antigen is the $\beta 1$ integrin and is the common β subunit of the VLA family of adhesion molecules.¹⁻⁴ It appears on approximately 41% of unfractionated human T lymphocytes, 41% of CD4+ lymphocytes, 43% of CD8+ lymphocytes, 5-30% of B lymphocytes and over 30% of null cells, macrophages and thymic lymphocytes.² CD29 is not present on granulocytes.¹

The 4B4 monoclonal antibody identifies the helper/inducer (CD4+/CD29+) subpopulation of CD4 lymphocytes.²

REAGENT

CYTO-STAT/COULTER CLONE 4B4-FITC
PN 6604105 - 50 tests (0.5 mL)

OR

CYTO-STAT/COULTER CLONE 4B4-RD1
PN 6604159 - 50 tests (0.5 mL)

CLONE: 4B4LDC9LDH8 was derived from the hybridization of mouse NS-1 myeloma cells with spleen cells from BALB/c mice immunized with cells of a T lymphocyte line derived from *Saguinus oedipus*.

Ig CHAIN: Mouse IgG1 heavy chain and kappa light chains

SOURCE: Ascites fluid

PURIFICATION: Affinity chromatography

CONJUGATION: 4B4-FITC (Fluorescein isothiocyanate)
4B4-RD1 (Phycoerythrin)

MOLAR RATIO: FITC/protein 3-10
RD1/protein 0.5-1.5

FLUORESCENCE:

FITC (Green) Excites at 468-509 nm
Emits at 504-541 nm

RD1 (Orange) Excites at 486-580 nm
Emits at 568-590 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 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.
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 (FITC labeled = clear, colorless to yellowish-green liquid; RD1 labeled = clear, colorless to pink 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. CYTO-STAT/ COULTER CLONE reagent is used directly from the vial. Bring reagent to 20-25°C prior to use.

USAGE

This reagent is recommended for use with standard flow cytometry methodologies using the COULTER® Q-PREP/ IMMUNOPREP, MULTI-Q-PREP/IMMUNOPREP or COULTER TQ-PREP/IMMUNOPREP Reagent System and Workstation.

The use of 4B4 in this reagent is not intended for enumeration of T cells in clinical diagnostic applications.

SELECTED RESEARCH REFERENCES

1. McMichael AJ, Beverley PCL, Cobbold S, Crompton MJ, Gilks W, Gotch FM, Hogg N, Horton M, Ling N, MacLennan ICM, Mason DY, Milstein C, Spiegelhalter D and Waldman H, eds. 1987. Leukocyte Typing III. Oxford, UK: Oxford University Press.
2. Morimoto C, Letvin NL, Boyd AW, Hagan M, Brown HM, Kornacki MM and Schlossman SF. 1985. The isolation and characterization of the human helper inducer T cell subset. J of Immunology 134:3762-3769.

3. Knapp W, Dorken B, Gilks WR, Rieber EP, Schmidt RE, Stein H and von dem Borne AEGK, eds. 1989. Leukocyte Typing IV. Oxford, UK: Oxford University Press.
4. Matsuyama T, Yamada A, Kay J, Yamada KM, Akiyama SK, Schlossman SF and Morimoto C. 1989. Activation of CD4 cells by fibronectin and anti-CD3 antibody: A synergistic effect mediated by the VLA-5 fibronectin receptor complex. J Exp Med 170:1133-1148.

PRODUCT AVAILABILITY

CYTO-STAT/COULTER CLONE 4B4-FITC
PN 6604105 - 50 tests (0.5 mL)

OR

CYTO-STAT/COULTER CLONE 4B4-RD1
PN 6604159 - 50 tests (0.5 mL)

4B4 is licensed under patent 4,661,446.
RD1 is licensed under patent 4,520,110.

For additional information in the US, call 800-526-7694.
Outside the US, contact your local Coulter Representative.

TRADEMARKS

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