

**CYTO-STAT®/
COULTER CLONE®
2H4-FITC,
2H4-RD1**

6603904 - 50 tests

6603866 - 50 tests

PN 4235994-F



	CLONE 1	CLONE 2
Specificity	CD45RA	CD45RA
Clone	2H4LDH11LDB9	2H4LDH11LDB9
Hybridoma	NS-1 x BALB/c	NS-1 x BALB/c
Immunogen	T lymphocyte line derived from <i>Aotus trivirgatus</i> (Owl monkey)	T lymphocyte line derived from <i>Aotus trivirgatus</i> (Owl monkey)
Ig Chain	IgG1	IgG1
Species	Mouse	Mouse
Source	Conditioned media	Conditioned media
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 2H4 antibody recognizes the CD45RA isoforms of the CD45 family of leukocyte antigens.^{1,2} These isoforms contain the sequence encoded by exon A and have molecular weights of 220 and 200 kD.² The proteins are expressed on the surface of a subset of T cells, on B cells and weakly on monocytes.³ CD45RA is highly expressed on CD4+ T cells which are designated as suppressor/inducer cells and which are functionally naive.^{4,5}

REAGENT

CYTO-STAT/COULTER CLONE 2H4-FITC
PN 6603904 - 50 tests (0.5 mL)

OR

CYTO-STAT/COULTER CLONE 2H4-RD1
PN 6603866 - 50 tests (0.5 mL)

CLONE: 2H4LDH11LDB9 (2H4) 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 *Aotus trivirgatus* (Owl monkey).¹

Ig CHAIN: Mouse IgG1 heavy chain and kappa light chains

SOURCE: Conditioned media

PURIFICATION: Affinity chromatography

CONJUGATION: 2H4-FITC (Fluorescein isothiocyanate)
2H4-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% Na₃ 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.

- 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.
- Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
- Do not use reagent beyond the expiration date on the vial label.
- Minimize exposure of reagent to light during storage or incubation.
- Avoid microbial contamination of reagents or erroneous results may occur.
- Use Good Laboratory Practices (GLP) when handling this reagent.
- Harmful if swallowed.
- 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 reagents are 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 TQ-PREP/ IMMUNOPREP Reagent System and Workstation.

The use of 2H4-FITC and 2H4-RD1 in this reagent is not intended for enumeration of 2H4 cells in clinical diagnostic applications.

SELECTED RESEARCH REFERENCES

- McMichael AJ, Beverley PCL, Cobbold S, Crumpton 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.
- Streuli M, Matsuyama T, Morimoto C, Schlossman SF and Saito H. 1987. Identification of the sequence required for expression of the 2H4 epitope on the human leukocyte common antigens. *J Exp Med* 166:1567-1572.
- Thomas A. 1989. The leucocyte common antigen family. *Ann Rev Immunol* 7:339-369.

- Morimoto C, Matsuyama T, Rudd C, Forsgren A, Letvin N and Schlossman S. 1988. Role of the 2H4 molecule in the activation of suppressor inducer function. *Eur J Immunol* 18:731-737.
- Merkenschlager M, Terry L, Edwards R and Beverley P. 1988. Limiting dilution analysis of proliferative responses in human lymphocyte populations defined by the monoclonal antibody UCHL1: implications for differential CD45 expression in T cell memory formation. *Eur J Immunol* 18:1653-1661.

PRODUCT AVAILABILITY

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PN 6603904 - 50 tests (0.5 mL)
OR
CYTO-STAT/COULTER CLONE 2H4-RD1
PN 6603866 - 50 tests (0.5 mL)

RD1 is licensed under patent 4,520,110.
2H4 is licensed under patent 4,649,106.

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

TRADEMARKS

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