# Mo-CD3/CD8 2 Color FCM Reagent: *sc-3977*



## BACKGROUND

Mouse CD3/CD8: sc-3977 is a direct immunofluorescence reagent formatted to identify and determine the percentage of matureT lymphocytes and suppressor/cytotoxic T lymphocytes in erythrocyte-lysed whole blood, based on cell-surface antigen expression. CD3 identifies T lymphocytes and non-covalently associates with either  $\alpha/\beta$  or  $\gamma/\delta$  TCR (1). CD8 identifies suppressor/cytotoxic T lymphocytes and binds class I MHC molecules, which enhances the activation of resting T lymphocytes (2,3). CD3+CD8+ and CD3+CD4+ percentages are used to characterize and monitor some forms of immunodeficiency and autoimmune disease (4,5).

Antigen Expression	Cell Type Identified	
CD3+	Mature T Cells	
CD3+ CD8+	Suppressor/Cytotoxic T Cells	

### **STORAGE**

Store at 4° C. Do not freeze. Stable for one year from the date of shipment. Protect reagents from prolonged exposure to light.

### PRODUCT

Supplied in 1.0 ml of PBS containing 0.1% azide and 0.1% gelatin. Sufficient for 50 tests. This product has been titrated for optimal performance. Recommended use is 20 uL per test ( $1x10^6$  cells). For research use only. Not for use in diagnostic procedures.

#### INSTRUMENT

Mouse CD3/CD8/CD45: sc-3969 is recommended for use with either a single or dual laser Flow Cytometer fitted with appropriate acquisition and analysis software, such as the FACSCalibur<sup>™</sup> Flow Cytometer fitted with CellQuest<sup>™</sup> Software by Becton Dickinson.

The flow cytometer must be equipped with a 488 nm laser and must be capable of detecting light scatter (forward and side) and two-color fluorescence with emission detectable in two ranges: 515-545 nm and 562-607 nm.

Antigen	Clone	Isotype	Label*	Detection Range (nm)
CD3	145-2C11	Armenian Hamster IgG	FITC	515-545
CD8	53-6.7	rat IgG <sub>2a</sub>	PE	562-607

\*Fluorescent labels include FITC: Fluorescein isothiocyanate; PE: phycoerythrin

### **ISOTYPE CONTROL**

sc-3977 CON (Armenian Hamster IgG FITC/rat  $IgG_{2a}$  PE) is the isotype matched negative control for this system and is suitable for 50 tests.

#### REFERENCES

1. Exley, M., Terhorst, C., and Wileman, T. 1991. Structure, assembly and intracellular transport of the T cell receptor for antigen. Semin. Immunol. <u>3</u>: 283-297.

2. Reichert, T., DeBruyere, M., Deneys, V., Totterman, T., Lydyard, P., Yuksel, F., Chapel, H., Jewell, D., Van Hove, L., Linden, J., *et al.* 1991. Lymphocyte subset reference ranges in adult Caucasians. Clin. Immunol. Immunopathol. <u>60</u>: 190-208.

3. Gallagher, P.F., Fazekas de St. Groth, B., and Miller, J.F. 1989. CD4 and CD8 molecues can physically associate with the same T-cell receptor. Proc. Natl. Acad. Sci. USA <u>86</u>: 10044-10048.

4. Foucar, K. and Goeken, J.A. 1982. Clinical Applications of immunologic techniques to the diagnosis of lymphoproliferative and immunodeficiency disorders. Lab. Med. <u>13</u>: 403-413.

5. Smolen, J.S., Chused, T.M., Leiserson, W.M., Reeves, J.P., Alling, D., and Steinberg, A.D. 1982. Heterogeneity of immunoregulatory T-cell subsets in systemic lupus erythematosus. Correlation with clinical features. Am. J. Med. <u>2</u>: 783-790.