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 α/β or γ/δ 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[™] Flow Cytometer fitted with CellQuest[™] 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 _{2a}	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.