

Hu-CD69/CD3

2 Color FCM Reagent: sc-3612



BACKGROUND

Human CD69/CD3: sc-3612 is a direct immunofluorescence reagent formatted to identify activated T lymphocytes and helper/inducer:suppressor/cytotoxic T lymphocyte subsets in erythrocyte-lysed whole blood. In normal peripheral blood, CD69 is variably expressed on lymphocytes (1). Upon activation, CD69 expression increases on T, B, and NK lymphocytes (2). In thymus, CD69 is constitutively expressed on the bright CD3+ subset of T cells, mostly on subpopulations of CD4+ CD8- or CD4- CD8+ T cells (2). CD3 identifies T lymphocytes and non-covalently associates with either α/β or γ/δ TCR (3). CD3+CD8+ and CD3+CD4+ percentages or counts 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+ CD69+	Activated 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 μ L per test (1×10^6 cells). **For research use only. Not for use in diagnostic procedures.**

INSTRUMENT

Human CD69/CD3: sc-3612 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)
CD69	FN50	IgG ₁	FITC	515-545
CD3	UCH-T1	IgG ₁	PE	562-607

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

ISOTYPE CONTROL

sc-3612 CON (IgG₁ FITC/IgG₁ PE) is the isotype matched negative control for this system and is suitable for 50 tests.

REFERENCES

- Schwartz, R., Biedobitek, G., and Stein, H. Cluster report: CD69. Knapp, W., Dörken, B., Gilks, W.R., *et al.* eds. *Leucocyte Typing IV: White Cell Differentiation Antigens*. New York, NY: Oxford University Press; 1989: 428-432.
- Testi, R., Phillips, J.H., and Lanier, L.L. 1988. Constitutive expression of a phosphorylated activation antigen (Leu 23) by CD3bright human thymocytes. *J. Immunol.* **141**: 2557-2563.
- Exley, M., Terhorst, C., and Wileman, T. 1991. Structure, assembly and intracellular transport of the T cell receptor for antigen. *Semin. Immunol.* **3**: 283-297.
- Foucar, K. and Goeken, J.A. 1982. Clinical Applications of immunologic techniques to the diagnosis of lymphoproliferative and immunodeficiency disorders. *Lab. Med.* **13**: 403-413.
- 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.* **2**: 783-790.