

# Hu-CD3/HLA-DR

## 2 Color FCM Reagent: sc-3953



### BACKGROUND

Human CD3/HLA-DR: sc-3953 is a direct immunofluorescence reagent formatted to identify and determine the percentage of activated human T lymphocytes and hematopoietic progenitor cells 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). HLA-DR is a class II MHC antigen that is expressed on B lymphocytes, monocytes, macrophages, activated T lymphocytes, activated NK lymphocytes and on human hematopoietic progenitor cells (2-4). HLA-DR is also present on thymic epithelium, B-lymphocyte-dependent areas of spleen and lymph node and B-cell lymphomas (5). The CD3+ HLA-DR+ phenotype identifies activated T lymphocytes.

Antigen Expression	Cell Type Identified
CD3+	Mature T Lymphocytes
CD3+ HLA-DR+	Activated T Lymphocytes

### 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 ( $1 \times 10^6$  cells). **For research use only. Not for use in diagnostic procedures.**

### INSTRUMENT

Human CD3/HLA-DR: sc-3953 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, 562-607 nm.

Antigen	Clone	Isotype	Label*	Detection Range (nm)
CD3	UCH-T1	IgG <sub>1</sub>	FITC	515-545
HLA-DR	L243	IgG <sub>2a</sub>	PE	562-607

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

### ISOTYPE CONTROL

sc-3953 CON (IgG<sub>1</sub> FITC/IgG<sub>2a</sub> PE) is the isotype matched negative control for this system and is suitable for 50 tests.

### REFERENCES

- 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.
- Alonso, M.C., Navarrete, C., Solana, R., Torres, A., Pena, J., and Festenstein, H. 1985. Differential expression of HLA-DR and HLA-DQ antigens on normal cells of the myelomonocytic lineage. *Tissue Antigens* **26**: 310-317.
- Lampson, L. and Levy, R. 1980. Two populations of Ia-like molecules on a B cell line. *J. Immunol.* **125**: 293-299.
- Brodsky, F. 1984. A matrix approach to human class I histocompatibility antigens: Reactions of four monoclonal antibodies with the products of nine haplotypes. *Immunogenetics* **19**: 179-194.
- Warnke, R.A. and Levy, R. 1980. Detection of T and B antigens with hybridoma monoclonal antibodies: a biotin-avidin-horseradish peroxidase method. *J. Histochem. Cytochem.* **28**: 771-776.