Hu-CD8/CD38
2 Color FCM Reagent: *sc-3958*

BACKGROUND

Human CD8/CD38: sc-3958 is a direct immunofluorescence reagent formatted to identify and determine the percentage of activated suppressor/cytotoxic T lymphocytes in erythrocyte-lysed whole blood, based on cell-surface antigen expression. CD8 identifies suppressor/cytotoxic T lymphocytes (1,2) and binds class I MHC molecules, resulting in enhanced activation of resting T lymphocytes (3). CD38 is expressed during the early and final stages of T and B cell differentiation, but not during the intermediate stage (4). CD38 is also expressed on activated T and NK lymphocytes (5). CD8+CD38+ T lymphocytes exhibit decreased activity of CD73, which is a maturation marker for T and B lymphocytes, suggesting that these cells are activated and/or immature suppressor/cytotoxic T lymphocytes (6). In HIV infection, the coexpression of CD8 and CD38, with a concomitant low percentage of CD4+ lymphocytes, is closely associated with disease progression (7). Selective elevation of HLA-DR+ CD38- CD8+ cells may be a marker of stable HIV disease (8,9).

Antigen Expression	Cell Type Identified
CD38+	Activated T Lymphocytes
CD8+	Suppressor/Cytotoxic T Cells
CD8+ CD38+	Activated 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

Human CD8/CD38: sc-3958 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.

ISOTYPE CONTROL

sc-3958 CON (IgG_1 FITC/IgG_1 PE) is the isotype matched negative control for this system and is suitable for 50 tests.

Antigen	Clone	Isotype	Label*	Detection Range (nm)
CD8	HIT8a	IgG_1	FITC	515-545
CD38	HB-7	IgG_1	PE	562-607

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

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