# Hu-CD38/CD56/CD19
# 3 Color FCM Reagent: *sc-3929*

## BACKGROUND

Human CD38/CD56/CD19: sc-3929 is a direct immunofluorescence reagent formatted to identify and determine the percentage of human NK lymphocytes and B lymphocytes in erythrocyte-lysed whole blood, based on cell-surface antigen expression. CD56 is present on essentially all resting and activated CD16+ natural killer (NK) cells and on a small percentage of CD3+ peripheral blood lymphocytes (1). CD56 expression decreases when NK cells are activated (2). CD19 is present on human B lymphocytes during all stages of B cell maturation, but is lost on plasma cells (3). CD38 is expressed during the early and final stages of T and B cell differentiation, but not during the intermediate stage (3). CD38 is also expressed on activated T and NK lymphocytes (4). CD38 may play a role in regulating humoral immune responses (5) and in the clinical management of HIV-infected persons (6).

| Antigen Expression | Cell Type Identified |
|---|---|
| CD56+ | NK Lymphocytes |
| CD38+ | Activated T and NK Lymphocytes |
| CD19+ | B 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 ($1x10^6$ cells). **For research use only. Not for use in diagnostic procedures.**

## INSTRUMENT

Human CD38/CD56/CD19: sc-3929 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 three-color fluorescence with emission detectable in three ranges: 515-545 nm, 562-607 nm and >650 nm, and it must be able to threshold and discriminate using the >650 channel.

| Antigen | Clone | Isotype | Label* | Detection Range (nm) |
|---|---|---|---|---|
| CD38 | HB-7 | $IgG_1$ | FITC | 515-545 |
| CD56 | 123C3 | $IgG_1$ | PE | 562-607 |
| CD19 | SJ25C1 | $IgG_1$ | PE-Cy5 | >650 |

*Fluorescent labels include FITC: Fluorescein isothiocyanate; PE: phycoerythrin; PE-Cy5: phycoerythrin-cyanin 5.

## ISOTYPE CONTROL

sc-3929 CON ($IgG_1$ FITC/$IgG_1$ PE/$IgG_1$ PE-Cy5) is the isotype matched negative control for this system and is suitable for 50 tests.

## REFERENCES


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