Hu-CD57/CD16/CD3
3 Color FCM Reagent: *sc-3927*

BACKGROUND

Human CD57/CD16/CD3: sc-3927 is a direct immunofluorescence reagent formatted to identify and determine the percentage of human T lymphocytes and natural killer (NK) 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). CD16 is an Fc receptor for IgG expressed by NK lymphocytes and is also variably expressed in some granulocyte populations (2). CD57 is a membrane antigen expressed on human natural killer cells and some other lymphoid cells (3). CD57 is also present on approximately 15-20% of normal peripheral blood mononuclear cells as well as on subsets of NK lymphocytes and T Lymphocytes (4). NK lymphocytes identified as $CD3^-$ and $CD16^+$ and/or $CD56^+$ mediate cytotoxicity against certain tumors and virus infected cells (5). NK mediated cytotoxicity does not require class I or II MHC molecules to be present on the cell (6).

Antigen Expression	Cell Type Identified
CD3+	Mature T Cells
CD3- CD16+	Natural Killer (NK) 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 CD57/CD16/CD3: sc-3927 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)
CD57	NK-1	IgM	FITC	515-545
CD16	3G8	IgG_1	PE	562-607
CD3	UCH-T1	IgG_1	PE-Cy5	>650

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

ISOTYPE CONTROL

sc-3927 CON (IgM 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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