

Hu-CD3/CD16+CD56/CD45

3 Color FCM Reagent: sc-2911



BACKGROUND

Human CD3/CD16+CD56/CD45: sc-2911 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). CD56, or NCAM, together with CD16 account for the entire NK lymphocyte population (3). CD45 is a major leukocyte cell surface molecule (4). NK lymphocytes identified as CD3⁺ and CD16⁺ and/or CD56⁺ mediate cytotoxicity against certain tumors and virus infected cells (3). NK mediated cytotoxicity does not require class I or II MHC molecules to be present on the cell (5).

Antigen Expression	Cell Type Identified
CD3+	Mature T Cells
CD3 ⁻ CD16+	Natural Killer (NK) Cells
CD3 ⁻ CD56+	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 (1x10⁶ cells). **For research use only. Not for use in diagnostic procedures.**

INSTRUMENT

Human CD3/CD16+CD56/CD45: sc-2911 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)
CD3	UCH-T1	IgG ₁	FITC	515-545
CD16	3G8	IgG ₁	PE	562-607
CD56	123C3	IgG ₁	PE	562-607
CD45	2D-1	IgG ₁	PE-Cy5	>650

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

ISOTYPE CONTROL

sc-2911 CON (IgG₁ FITC/IgG₁ PE/IgG₁ PE-Cy5) is the isotype matched negative control for this system and is suitable for 50 tests.

REFERENCES

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