

Hu-CD3/CD8/CD45/CD4

4 Color FCM Reagent: sc-2920



BACKGROUND

Human CD3/CD8/CD45/CD4: sc-2920 is a direct immunofluorescence reagent formatted to identify and determine the percentage of mature T cells, suppressor/cytotoxic T cells and helper/inducer T cells 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, which recognizes antigens associated with the MHC (1). CD8 identifies suppressor/cytotoxic T lymphocytes and binds class I MHC molecules, which enhances the activation of resting T lymphocytes (2). CD45 is a major leukocyte cell surface molecule (3). CD4 identifies helper/inducer T lymphocytes and binds class II MHC molecules (2). CD4 is also the primary receptor for HIV (4). CD3+CD8+ and CD3+CD4+ percentages or counts are used to characterize and monitor some forms of immunodeficiency and autoimmune disease (5,6).

| Antigen Expression | Cell Type Identified |
|--------------------|------------------------------|
| CD3+ | Mature T Cells |
| CD3+ CD8+ | Suppressor/Cytotoxic T Cells |
| CD3+ CD4+ | Helper/Inducer 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 (1×10^6 cells). **For research use only. Not for use in diagnostic procedures.**

INSTRUMENT

Human CD3/CD8/CD45/CD4: sc-2920 is recommended for use with a 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 635 nm and 488 nm lasers and must be capable of detecting light scatter (forward and side) and four-color fluorescence with emission detectable in four ranges: 515-545 nm, 562-607 nm, >650 nm and 652-668 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 |
| CD8 | HIT8a | IgG ₁ | PE | 562-607 |
| CD45 | 2D-1 | IgG ₁ | PE-Cy5 | >650 |
| CD4 | MT310 | IgG ₁ | APC | 652-668 |

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

ISOTYPE CONTROL

sc-2920 CON (IgG₁ FITC/IgG₁ PE/IgG₁ PE-Cy5/IgG₁ APC) is the isotype matched negative control for this system and is suitable for 50 tests.

REFERENCES

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