

Hu-CD4/CD8

2 Color FCM Reagent: sc-3954



BACKGROUND

Human CD4/CD8: sc-3954 is a direct immunofluorescence reagent formatted to identify and determine the percentage of mature helper/inducer and suppressor/cytotoxic T cells in erythrocyte-lysed whole blood, based on cell-surface antigen expression. In immune deficiency states, helper T cells decline and suppressor T cells increase. CD4 identifies helper/inducer T lymphocytes and binds class II MHC molecules (1). CD4 is also the primary receptor for HIV (2). As HIV progresses, infected individuals exhibit a steady decrease in helper/inducer lymphocytes (3,4). CD8 identifies suppressor/cytotoxic T lymphocytes (5,6) and binds class I MHC molecules, resulting in enhanced activation of resting T lymphocytes (1). Beginning at seroconversion and during the first stages of HIV infection, the number of CD8+ T lymphocytes increases, while the number of CD4+ T lymphocytes decreases (7). At the onset of AIDS, CD3+, CD4+ and CD8+ T lymphocyte levels decline, but in the late stages of AIDS, the remaining lymphocytes are CD8+ (7).

Antigen Expression	Cell Type Identified
CD4+	Helper/Inducer T Cells
CD8+	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 (1x10⁶ cells). **For research use only. Not for use in diagnostic procedures.**

INSTRUMENT

Human CD4/CD8: sc-3954 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.

Antigen	Clone	Isotype	Label*	Detection Range (nm)
CD4	MT310	IgG ₁	FITC	515-545
CD8	HIT8a	IgG ₁	PE	562-607

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

ISOTYPE CONTROL

sc-3954 CON (IgG₁ FITC/IgG₁ PE) is the isotype matched negative control for this system and is suitable for 50 tests.

REFERENCES

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