

# Hu-CD3/CD19/CD45

## 3 Color FCM Reagent: sc-2912



### BACKGROUND

Human CD3/CD19/CD45: sc-2912 is a direct immunofluorescence reagent formatted to identify and determine the percentage of human T lymphocytes and B lymphocytes in erythrocyte-lysed whole blood, based on cell-surface antigen expression. CD3 identifies T lymphocytes and non-covalently associates with either  $\alpha/\beta$  or  $\gamma/\delta$  TCR (1). CD45 is a major leukocyte cell surface molecule (2). NK lymphocytes identified as CD3<sup>-</sup> and CD16<sup>+</sup> and/or CD56<sup>+</sup> mediate cytotoxicity against certain tumors and virus infected cells (3). CD19 is present on human B lymphocytes during all stages of B cell maturation, but is lost on plasma cells (4). The total population of T lymphocytes and B lymphocytes are used to characterize and monitor some forms of immunodeficiency and autoimmune disease (5,6).

Antigen Expression	Cell Type Identified
CD3+	Mature T Lymphocytes
CD3 <sup>-</sup> CD19+	Total 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<sup>6</sup> cells). **For research use only. Not for use in diagnostic procedures.**

### INSTRUMENT

Human CD3/CD19/CD45: sc-2912 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 <sub>1</sub>	FITC	515-545
CD19	SJ25C1	IgG <sub>1</sub>	PE	562-607
CD45	2D-1	IgG <sub>1</sub>	PE-Cy5	>650

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

### ISOTYPE CONTROL

sc-2912 CON (IgG<sub>1</sub> FITC/IgG<sub>1</sub> PE/IgG<sub>1</sub> PE-Cy5) is the isotype matched negative control for this system and is suitable for 50 tests.

### REFERENCES

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