

## TECHNICAL DATA SHEET

### CyFlow™ CD4 APC-Cy7 Anti-Hu; Clone MEM-241

**REF** BR682612

**For Research Use Only.  
Not for use in diagnostic or therapeutic procedures.**

### Specifications

<b>Antigen</b>	CD4
<b>Alternative Names</b>	T4, Leu3a
<b>Clone</b>	MEM-241
<b>Clonality</b>	monoclonal
<b>Format</b>	APC-Cy7
<b>Host / Isotype</b>	Mouse / IgG1
<b>Species Reactivity</b>	Human
<b>Negative Species Reactivity</b>	—
<b>Quantity</b>	100 tests
<b>Immunogen</b>	2 N-terminal domains of human CD4 fused to human IgG1 Fc

### Specificity

The mouse monoclonal antibody MEM-241 recognizes CD4 antigen, a 55 kDa transmembrane glycoprotein expressed on a subset of T lymphocytes ("helper" T-cells) and also on monocytes, tissue macrophages and granulocytes.

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## Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10<sup>6</sup> cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

## Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

## Storage and Stability

<b>Storage</b>	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
<b>Stability</b>	Do not use after expiration date stamped on vial label.

## Background Information

CD4 (T4) is a single chain transmembrane glycoprotein and belongs to immunoglobulin supergene family. In extracellular region there are 4 immunoglobulin-like domains (1 Ig-like V-type and 3 Ig-like C2-type). Transmembrane region forms 25 aa, cytoplasmic tail consists of 38 aa. Domains 1,2 and 4 are stabilized by disulfide bonds. The intracellular domain of CD4 is associated with p56Lck, a Src-like protein tyrosine kinase. It was described that CD4 segregates into specific detergent-resistant T-cell membrane microdomains.

Extracellular ligands: MHC class II molecules (binds to CDR2-like region in CD4 domain 1); HIV envelope protein gp120 (binds to CDR2-like region in CD4 domain 1); IL-16 (binds to CD4 domain 3), Human seminal plasma glycoprotein gp17 (binds to CD4 domain 1), L-selectin

Intracellular ligands: p56LckCD4 is a co-receptor involved in immune response (co-receptor activity in binding to MHC class II molecules) and HIV infection (human immunodeficiency virus; CD4 is primary receptor for HIV-1 surface glycoprotein gp120). CD4 regulates T-cell activation, T/B-cell adhesion, T-cell differentiation, T-cell selection and signal transduction.

Defects in antigen presentation (MHC class II) cause dysfunction of CD4+ T-cells and their almost complete absence in patients blood, tissue and organs (SCID immunodeficiency).

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The Safety Data Sheet for this product is available at [www.sysmex-partec.com/services](http://www.sysmex-partec.com/services).

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