TECHNICAL DATA SHEET

CyFlow™ CD4 Azide Free
Anti-Hu; Clone MEM-115

REF **CD005302**

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD4
Alternative Names	T4, Leu3a
Clone	MEM-115
Clonality	monoclonal
Format	Azide Free
Host / Isotype	Mouse / IgG2a
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Human thymocytes and T lymphocytes

Specificity

The mouse monoclonal antibody MEM-115 recognizes an epitope in the D1 domain of CD4 antigen, a 55 kDa transmebrane glycoprotein expressed on a subset of T lymphocytes ("helper" T cells) and also

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on monocytes, tissue macrophages and granulocytes. It is negative in Western blotting even with non-reduced samples of cell lysates.

Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Immunoprecipitation
- Functional assays

Storage Buffer

The reagent is provided in azide-free phosphate buffered saline (PBS) solution, pH ≈7.4; 0.2 µm filter sterilized.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	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

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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 diferentiation, 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.

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