

TECHNICAL DATA SHEET

CyFlow™ CD3 act. Purified Anti-Hu/Ms; Clone APA1/1

REF CF594139

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD3 (activation epitope)
Alternative Names	—
Clone	APA1/1
Clonality	monoclonal
Format	Purified
Host / Isotype	Mouse / IgG1
Species Reactivity	Human Mouse
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	Purified human CD3 proteins isolated from thymus

Specificity

The mouse monoclonal antibody APA1/1 recognizes an activation-dependent intracellular epitope of CD3 ε. Exposure of the epitope precedes CD3 phosphorylation and recruitment and activation of ZAP70, which

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initiates the signaling cascade produced by T-cell activation. APA1/1 provides the earliest known marker for TCR-mediated T cell activation

Application

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

- Flow cytometry
- Immunoprecipitation
- Western blot
- Immunohistochemistry (frozen sections)
- Immunocytochemistry

Storage Buffer

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

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

CD3 complex is crucial in transducing antigen-recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR complex.

T cell activation through the antigen receptor (TCR) involves the cytoplasmic tails of the CD3 subunits CD3 γ , CD3 δ , CD3 ϵ and CD3 ζ . These CD3 subunits are structurally related members of the immunoglobulins super family encoded by closely linked genes on human chromosome 11. The CD3 components have long cytoplasmic tails that associate with cytoplasmic signal transduction molecules. This association is mediated at least in part by a double tyrosine-based motif present in a single copy in the CD3 subunits. CD3 may play a role in TCR-induced growth arrest, cell survival and proliferation. The CD3 antigen is present on 68-82% of normal peripheral blood lymphocytes, 65-85% of thymocytes and Purkinje cells in the cerebellum. It is never expressed on B or NK cells. Decreased percentages of T lymphocytes may be observed in some autoimmune diseases.

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The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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