

TECHNICAL DATA SHEET

CyFlow™ CD4 FITC Anti-Hu; Clone MEM-241

REF BX162617



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

Specifications

Antigen	CD4
Alternative Names	T4, Leu3a
Clone	MEM-241
Clonality	monoclonal
Format	FITC
Host / Isotype	Mouse / IgG1
Species Reactivity	Human
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	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.

HCDM (HLDA VIII)—WS Code M241

Application

The reagent is designed for flow cytometry analysis of human blood cells. Recommended usage is 20 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (2 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 0.09% (w/v) sodium azide and 0.2% (w/v) BSA.

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, Leu3a) is a 55 kDa single-chain transmembrane glycoprotein expressed on a subset of T lymphocytes ("helper" T-cells) and also on monocytes, tissue macrophages and granulocytes. 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.

Warnings

Non-Hazardous Statement: This is not considered hazardous by the criteria in 29 CFR 1910.1200 or the General Classification guideline for preparations of the EU.

Safety Data Sheet Statement: Important information regarding the safe handling, transport, and disposal of this product is contained in the Safety Data Sheet (SDS). SDS are available at <http://www.sysmex-partec.com/services>, or at <https://us.sysmex-flowcytometry.com/> (U.S. customers only).

References

- Millan J, Cerny J, Horejsí V, Alonso MA: CD4 segregates into specific detergent-resistant T-cell membrane microdomains. *Tissue Antigens*. 1999 Jan; 53(1):33-40. < PMID: 10082429 >
- Foti M, Phelouzat MA, Holm A, Rasmussen BJ, Carpentier JL: p56Lck anchors CD4 to distinct microdomains on microvilli. *Proc Natl Acad Sci USA*. 2002 Feb 19; 99(4):2008-13. < PMID: 11854499 >
- Clapham PR, McKnight A: Cell surface receptors, virus entry and tropism of primate lentiviruses. . *J Gen Virol*. 2002 Aug; 83(8):1809-29. < PMID: 12124446 >
- Brdicková N, Brdicka T, Angelisová P, Horváth O, Spicka J, Hilgert I, Paces J, Simeoni L, Kliche S, Merten C, Schraven B, Horejsí V: LIME: a new membrane Raft-associated adaptor protein involved in CD4 and CD8 coreceptor signaling. *J Exp Med*. 2003 Nov 17; 198(10):1453-62. < PMID: 14610046 >
- Zola H, Swart B, Banham A, Barry S, Beare A, Bensussan A, Boumsell L, D Buckley C, Buhring HJ, Clark G, Engel P, Fox D, Jin BQ, Macardle PJ, Malavasi F, Mason D, Stockinger H, Yang X: CD molecules 2006: human cell differentiation molecules. *J Immunol Methods*. 2007 Jan 30; 319(1-2):1-5. < PMID: 17174972 >
- Manasa J, Musabaike H, Masimirembwa C, Burke E, Luthy R, Mudzori J: Evaluation of the Partec flow cytometer against the BD FACSCalibur system for monitoring immune responses of human immunodeficiency virus-infected patients in Zimbabwe. *Clin Vaccine Immunol*. 2007 Mar; 14(3):293-8. < PMID: 17267593 >
- Anderson AE, Sayers BL, Haniffa MA, Swan DJ, Diboll J, Wang XN, Isaacs JD, Hilkens CM: Differential regulation of naïve and memory CD4+ T cells by alternatively activated dendritic cells. *J Leukoc Biol*. 2008 Jul; 84(1):124-33. < PMID: 18430785 >
- Karlsson KR, Cowley S, Martinez FO, Shaw M, Minger SL, James W: Homogeneous monocytes and macrophages from human embryonic stem cells following coculture-free differentiation in M-CSF and IL-3. *Exp Hematol*. 2008 Sep; 36(9):1167-75. < PMID: 18550257 >
- Hovden AO, Karlsen M, Jonsson R, Aarstad HJ, Appel S: Maturation of monocyte derived dendritic cells with OK432 boosts IL-12p70 secretion and conveys strong T-cell responses. *BMC Immunol*. 2011 Jan 5; 12:2. < PMID: 21208424 >
- Kanderova V, Kuzilkova D, Stuchly J, Vaskova M, Brdicka T, Fiser K, Hrusak O, Lund - Johansen F, Kalina T: High - resolution antibody array analysis of childhood acute leukemia cells. *Mol Cell Proteomics*. 2016 Apr 1; 15(4):1246 - 61. < PMID: 26785729 >

Symbols

REF	Reference number		Contains sufficient for <n> tests
RUO	For research use only		Temperature limit
LOT	Batch code		Keep away from sunlight
	Manufacturer		Consult accompanying documents
	Use-by date		Unique device identifier