

TECHNICAL DATA SHEET

CyFlow™ CD8 FITC Anti-Hu; Clone MEM-31

REF BX217647

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

Specifications

Antigen	CD8
Alternative Names	—
Clone	MEM-31
Clonality	monoclonal
Format	FITC
Host / Isotype	Mouse / IgG2a
Species Reactivity	Human
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Crude thymus membrane fraction

Specificity

The mouse monoclonal antibody MEM-31 recognizes a conformationally-dependent epitope of CD8 antigen, a cell surface glycoprotein found on most cytotoxic T lymphocytes that mediates efficient cell-

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cell interactions within the immune system. CD8 is a disulfide-linked dimer and exists as a CD8 α/α homodimer or CD8 α/β heterodimer (each monomer approx. 32-34 kDa).

The antibody does not react with formaldehyde-fixed cells; negative in Western Blotting application.

Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 20 μ l reagent / 100 μ l of whole blood or 10^6 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 $\approx$ 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

The CD8 T cell coreceptor (monomer approx. 32-34 kDa) is expressed as α/β heterodimer on majority of MHC I-restricted conventional T cells and thymocytes and as α/α homodimer on subsets of memory T cells, intraepithelial lymphocytes, NK cells and dendritic cells. Regulation of CD8 β level on T cell surface seems to be an important mechanism to control their effector function. Assembly of CD8 α/β but not α/α dimers is connected with formation or localization to the lipid rafts. Recruiting triggered TCR complexes to these membrane microdomains as well as affinity of TCR to MHC I is modulated by CD8, thereby affecting the functional diversity of the TCR signaling.

References

- Horejsi V, Hilgert I, Kristofova H, Bazil V, Bukovsky A, Kulhankova J: Monoclonal antibodies against human leucocyte antigens (I); Antibodies against beta-2-microglobulin, immunoglobulin kappa light chains, HLA-DR-like antigens, T8 antigen, T1 antigen, a monocyte antigen, and a pan-leucocyte antigen. Folia Biol (Praha). 1986; 32(1):12-25. < PMID: 2422063 >
- McMichael AJ, Beverley PCL, Cobbold S, et al. (Eds): Leucocyte Typing III, White Cell Differentiation Antigens. Oxford University Press, Oxford. 1987; 1-1050. < NLM ID: 8913266 >

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- Horejsí V, Angelisová P, Bazil V, Kristofová H, Stoyanov S, Stefanová I, Hausner P, Vosecký M, Hilgert I: Monoclonal antibodies against human leucocyte antigens (II); Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). Folia Biol (Praha). 1988; 34(1):23-34. < PMID: 2968928 >
- 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 >
- Devine L, Thakral D, Nag S, Dobbins J, Hodsdon ME, Kavathas PB: Mapping the binding site on CD8 beta for MHC class I reveals mutants with enhanced binding. J Immunol. 2006 Sep 15; 177(6):3930-8. < PMID: 16951356 >
- Estefanía E, Flores R, Gómez-Lozano N, Aguilar H, López-Botet M, Vilches C: Human KIR2DL5 is an inhibitory receptor expressed on the surface of NK and T lymphocyte subsets. J Immunol. 2007 Apr 1; 178(7):4402-10. < PMID: 17371997 >
- Drbal K, Moertelmaier M, Holzhauser C, Muhammad A, Fuerthbauer E, Howorka S, Hinterberger M, Stockinger H, Schütz GJ: Single-molecule microscopy reveals heterogeneous dynamics of lipid raft components upon TCR engagement. Int Immunol. 2007 May; 19(5):675-84. < PMID: 17446208 >
- Pang DJ, Hayday AC, Bijlmakers MJ: CD8 Raft localization is induced by its assembly into CD8alpha beta heterodimers, Not CD8alpha alpha homodimers. J Biol Chem. 2007 May 4; 282(18):13884-94. < PMID: 17341584 >
- van den Berg HA, Wooldridge L, Laugel B, Sewell AK: Coreceptor CD8-driven modulation of T cell antigen receptor specificity. J Theor Biol. 2007 Nov 21; 249(2):395-408. < PMID: 17869274 >
- Linnebacher M, Wienck A, Boeck I, Klar E: Identification of an MSI-H tumor-specific cytotoxic T cell epitope generated by the -1 frame of U79260(FTO). J Biomed Biotechnol. 2010; 2010:841451. < PMID: 20339516 >

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

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