TECHNICAL DATA SHEET

CyFlow™ CD48 PE

Anti-Hu; Clone MEM-102

REF **AV058354**

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD48
Alternative Names	BLAST-1, BCM1, SLAMF2
Clone	MEM-102
Clonality	monoclonal
Format	PE
Host / Isotype	Mouse / IgG1
Species Reactivity	Human, Non-Human Primates
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Raji cells: human Burkitt's lymphoma cell line

Specificity

The mouse monoclonal antibody MEM-102 recognizes CD48 antigen, a 40-47 kDa GPI-anchored membrane protein (immunoglobulin supergene family) widely expressed on hematopoietic cells; it is negative on granulocytes, platelets and erythrocytes.

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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 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 ≈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

CD48 (Blast-1) belongs to the CD2 subset of the Ig superfamily, which includes CD2, CD2F-10, CD58, CD84, CD150, CD229, CD244 and others. These molecules bind to the same or another members of their family, thus mediate homotypic or heterotypic adhesion. CD48 is a GPI-anchored protein broadly expressed on hematopoietic cells and serves as a high affinity ligand for 2B4 and low affinity ligand for CD2. 2B4-CD48 interaction among NK cells and NK-T cells regulates cell proliferation. Signaling through CD48 results in eosinophil activation and CD48 expression is increased in several infectious diseases.

References

- Bazil V, Stefanova I, Hilgert I, Kristofova H, Vanek S, Bukovsky A, Horejsi V: Monoclonal antibodies against human leucocyte antigens (III): Antibodies against CD45R, CD6, CD44 and two newly described broadly expressed glycoproteins MEM-53 and MEM-102. Folia Biol (Praha). 1989; 35(5):289-97. < PMID: 2534480 >
- Knapp W, Dorken B, Gilks W, Rieber EP, Schmidt RE, Stein H, von dem Borne AEGK (Eds): Leucocyte Typing IV. Oxford University Press, Oxford. 1989; 1-1820. < NLM ID: 8914679 >
- Korinek V, Stefanova I, Angelisova P, Hilgert I, Horejsi V: The human leucocyte antigen CD48 (MEM-102) is closely related to the activation marker Blast-1. Immunogenetics. 1991; 33(2):108-12. < PMID: 1999350 >

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- Doussis IA, Gatter KC, Mason DY: CD68 reactivity of non-macrophage derived tumours in cytological specimens. J Clin Pathol. 1993 Apr; 46(4):334-6. < PMID: 7684403 >
- Stulnig TM, Berger M, Sigmund T, Stockinger H, Horejsí V, Waldhäusl W: Signal transduction via glycosyl phosphatidylinositol-anchored proteins in T cells is inhibited by lowering cellular cholesterol. J Biol Chem. 1997 Aug 1; 272(31):19242-7. < PMID: 9235917 >
- Angelisová P, Drbal K, Horejsí V, Cerný J: Association of CD10/neutral endopeptidase 24.11 with membrane microdomains rich in glycosylphosphatidylinositol-anchored proteins and Lyn kinase. Blood. 1999 Feb 15; 93(4):1437-9. < PMID: 10075459 >
- Mathew SO, Kumaresan PR, Lee JK, Huynh VT, Mathew PA: Mutational analysis of the human 2B4 (CD244)/CD48 interaction: Lys68 and Glu70 in the V domain of 2B4 are critical for CD48 binding and functional activation of NK cells. J Immunol. 2005 Jul 15; 175(2):1005-13. < PMID: 16002700 >
- Assarsson E, Kambayashi T, Persson CM, Chambers BJ, Ljunggren HG: 2B4/CD48-mediated regulation of lymphocyte activation and function. J Immunol. 2005 Aug 15; 175(4):2045-9. < PMID: 16081768 >
- Lee KM, Forman JP, McNerney ME, Stepp S, Kuppireddi S, Guzior D, Latchman YE, Sayegh MH, Yagita H, Park CK, Oh SB, Wülfing C, Schatzle J, Mathew PA, Sharpe AH,Kumar V: Requirement of homotypic NK-cell interactions through 2B4(CD244)/CD48 in the generation of NK effector functions. Blood. 2006 Apr 15; 107(8):3181-8. < PMID: 15905190 >
- Munitz A, Bachelet I, Eliashar R, Khodoun M, Finkelman FD, Rothenberg ME, Levi-Schaffer F: CD48 is an allergen and IL-3-induced activation molecule on eosinophils. J Immunol. 2006 Jul 1; 177(1):77-83. < PMID: 16785501 >
- Drbal K, Moertelmaier M, Holzhauser C, Muhammad A, Fuertbauer 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 >

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

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