



Antibodies

1F-226-T025

Monoclonal Antibody to CD48 Fluorescein (FITC) conjugated (25 tests)

Clone:	MEM-102
Isotype:	Mouse IgG1
Specificity:	The antibody MEM-102 reacts with CD48 antigen (Blast-1), a 40-47 kDa GPI-anchored membrane protein (immunoglobulin supergene family) widely expressed on hematopoietic cells; it is negative on granulocytes, platelets and erythrocytes. HLDA V; WS Code AS S014
Immunogen:	Raji human Burkitt's lymphoma cell line
Species Reactivity:	Human, Non-Human Primates
Preparation:	The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label. Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user.
Usage:	The reagent is designed for Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.5 ml) is sufficient for 25 tests.
Expiration:	See vial label
Lot Number:	See vial label
Background:	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.

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****References:**

- *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.
- *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.
- *Lee KM, Forman JP, McNerney ME, Stepp S, Kuppireddi S, Guzier 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.
- *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.
- *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.
- *Leukocyte Typing IV., Knapp W. et al. (Eds.), Oxford University Press (1989).
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.
- *Leukocyte Typing V., Schlossman S. et al. (Eds.), Oxford University Press (1995).
- *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.
- *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.
- *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.

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