



1B-226-C025

## Monoclonal Antibody to CD48 Biotin conjugated (0.025 mg)

<b>Clone:</b>	MEM-102
<b>Isotype:</b>	Mouse IgG1
<b>Specificity:</b>	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
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	Raji human Burkitt's lymphoma cell line
<b>Species Reactivity:</b>	Human, Non-Human Primates
<b>Preparation:</b>	The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.
<b>Concentration:</b>	1 mg/ml
<b>Storage Buffer:</b>	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
<b>Storage / Stability:</b>	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
<b>Usage:</b>	Biotinylated antibody is designed for indirect immunofluorescence analysis by Flow Cytometry. Suggested working dilution is 1:1000. Indicated dilution is recommended starting point for use of this product. Working concentrations should be determined by the investigator.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	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.
  - \*Schatzmaier P, Supper V, Göschl L, Zwirzitz A, Eckerstorfer P, Ellmeier W, Huppa JB, Stockinger H: Rapid multiplex analysis of lipid raft components with single-cell resolution. *Sci Signal.* 2015 Sep 22;8(395):rs11

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