



1F-225-T100

Monoclonal Antibody to CD47 Fluorescein (FITC) conjugated (100 tests)

Clone:	MEM-122
Isotype:	Mouse IgM
Specificity:	The antibody MEM-122 reacts with CD47 (Integrin Associated Protein), a 50-55 kDa membrane adhesion molecule (thrombospondin receptor; immunoglobulin supergene family) expressed on leukocytes, platelets and erythrocytes. It is also expressed on epithelial cells, endothelial cells, fibroblasts and many tumor cell lines. HLDA VI; WS Code AS A051
Regulatory Status:	RUO
Immunogen:	COS-7 (African green monkey) cells
Species Reactivity:	Human, Non-Human Primates, Porcine
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 stabilizing Tris buffered saline (TBS) solution containing 15 mM sodium azide.
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.
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 (2 ml) is sufficient for 100 tests.
Expiration:	See vial label
Lot Number:	See vial label
Background:	CD47 (integrin-associated protein, IAP) is an ubiquitously expressed cell surface transmembrane glycoprotein interacting with several integrins and regulating their functions. Engagement of CD47 by soluble ligands or counter receptors modulates various signaling pathways, such as activation of heterotrimeric G proteins. Binding secreted thrombospondin-1, CD47 counteracts graft vascularization. CD47 acts also as a ligand for CD172a (signal regulatory protein alpha, SIRP alpha), an immune inhibitory receptor on macrophages; this interaction prevents phagocytosis of CD47-positive cells. Moreover, CD47-CD172a system affects cell migration, B cell adhesion and T cell activation. CD47 is also involved in modulation of chondrocyte responses to mechanical signals, and promotes neuronal development, being especially abundant in synapse-rich regions of brain and retina.

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

**Antibodies****References:**

- *Barazi HO, Li Z, Cashel JA, Krutzsch HC, Annis DS, Mosher DF, Roberts DD: Regulation of integrin function by CD47 ligands. Differential effects on alpha vbeta 3 and alpha 4beta1 integrin-mediated adhesion. *J Biol Chem.* 2002 Nov 8;277(45):42859-66.
- *Murata T, Ohnishi H, Okazawa H, Murata Y, Kusakari S, Hayashi Y, Miyashita M, Itoh H, Oldenborg PA, Furuya N, Matozaki T: CD47 promotes neuronal development through Src- and FRG/Vav2-mediated activation of Rac and Cdc42. *J Neurosci.* 2006 Nov 29;26(48):12397-407.
- *Ide K, Wang H, Tahara H, Liu J, Wang X, Asahara T, Sykes M, Yang YG, Ohdan H: Role for CD47-SIRPalpha signaling in xenograft rejection by macrophages. *Proc Natl Acad Sci U S A.* 2007 Mar 20;104(12):5062-6.
- *Orazizadeh M, Lee HS, Groenendijk BC, Millward-Sadler J, Wright MO, Lindberg FP, Salter DM. CD47 associates with alpha 5 integrin and regulates responses of human articular chondrocytes to mechanical stimulation in an in vitro model. *Arthritis Res Ther.* 2008 Jan 10;10(1):R4
- *Isenberg JS, Pappan LK, Romeo MJ, Abu-Asab M, Tsokos M, Wink DA, Frazier WA, Roberts DD: Blockade of thrombospondin-1-CD47 interactions prevents necrosis of full thickness skin grafts. *Ann Surg.* 2008 Jan;247(1):180-90.
- *Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
- *Smith RE, Patel V, Seatter SD, Deehan MR, Brown MH, Brooke GP, Goodridge HS, Howard CJ, Rigley KP, Harnett W, Harnett MM: A novel MyD-1 (SIRP-1alpha) signaling pathway that inhibits LPS-induced TNFalpha production by monocytes. *Blood.* 2003 Oct 1;102(7):2532-40.

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