



PB-225-T100

## Monoclonal Antibody to CD47 Pacific Blue™ conjugated (100 tests)

<b>Clone:</b>	MEM-122
<b>Isotype:</b>	Mouse IgM
<b>Specificity:</b>	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
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	COS-7 (African green monkey) cells
<b>Species Reactivity:</b>	Human, Non-Human Primates, Porcine
<b>Preparation:</b>	The purified antibody is conjugated with Pacific Blue™ under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
<b>Storage Buffer:</b>	The reagent is provided in stabilizing Tris buffered saline (TBS) solution containing 15 mM sodium azide.
<b>Storage / Stability:</b>	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.
<b>Usage:</b>	The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10 <sup>6</sup> cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	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:**

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- \*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.
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- \*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.
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- \*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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