

TECHNICAL DATA SHEET

CyFlow™ CD47 Purified Anti-Hu; Clone MEM-122

REF AV372758

For Research Use Only.
Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD47
Alternative Names	IAP
Clone	MEM-122
Clonality	monoclonal
Format	Purified
Host / Isotype	Mouse / IgM
Species Reactivity	Human, Non-Human Primates Pig
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	COS-7 African green monkey kidney cells

Specificity

The mouse monoclonal antibody MEM-122 recognizes CD47 antigen, a 50-55 kDa membrane adhesion molecule (thrombospondin receptor; immunoglobulin supergene family) expressed on leukocytes,

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

platelets and erythrocytes. It is also expressed on epithelial cells, endothelial cells, fibroblasts and many tumor cell lines.

Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Western blot
- Immunohistochemistry (frozen sections)

Storage Buffer

The reagent is provided in Tris buffered saline (TBS) solution, pH $\approx$ 8.0, 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

CD47 (IAP; integrin-associated protein) 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 (SIRP α ; signal regulatory protein α), 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.

References

- Kishimoto T, Goyert S, Kikutani H, Mason D, Miyasaka M, Moretta L, Ohno T, Okumura K, Shaw S, Springer TA, Sugamura K, Sugawara H, von dem Borne AEGK, Zola H (Eds): Leucocyte Typing VI. Garland Publishing Inc, New York. 1997; 1-1342. < NLM ID: 9712219 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- Barazi HO, Li Z, Cashel JA, Kruttsch HC, Annis DS, Mosher DF, Roberts DD: Regulation of integrin function by CD47 ligands: Differential effects on α 5 β 1 and α 4 β 1 integrin-mediated adhesion. J Biol Chem. 2002 Nov 8; 277(45):42859-66. < PMID: 12218055 >
- 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-1 α) signaling pathway that inhibits LPS-induced TNF α production by monocytes. Blood. 2003 Oct 1; 102(7):2532-40. < PMID: 12805067 >
- 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. < PMID: 17135401 >
- Ide K, Wang H, Tahara H, Liu J, Wang X, Asahara T, Sykes M, Yang YG, Ohdan H: Role for CD47-SIRP α signaling in xenograft rejection by macrophages. Proc Natl Acad Sci USA. 2007 Mar 20; 104(12):5062-6. < PMID: 17360380 >
- 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. < PMID: 18156939 >
- Orazizadeh M, Lee HS, Groenendijk BC, Millward-Sadler J, Wright MO, Lindberg FP, Salter DM: CD47 associates with α 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. < PMID: 18186923 >

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

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com