

Technical Data Sheet

Purified Rat Anti-Mouse CD47

Product Information

Material Number:	555297
Alternate Name:	IAP
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	miap301
Immunogen:	Not reported
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The miap301 antibody reacts with the extracellular domain of CD47, also known as Integrin-Associated Protein (IAP).¹ CD47 is a 50-kDa plasma membrane protein with an extracellular immunoglobulin variable region-like domain, a multiple membrane-spanning segment, and a short C-terminal cytoplasmic tail. IAP is often physically associated with $\beta 3$ integrins, and it may act as a transducer element in activation mediated by these integrins. CD47 is expressed by a wide variety of cell types, including some cells lacking integrins, such as erythrocytes. The cytoplasmic tail region is expressed as alternatively spliced forms, which are differentially expressed in diverse tissues, suggesting that IAP may have distinct functions in various tissues. CD47 and its ligand, CD172a, are proposed to mediate bi-directional signaling to modify neural synaptic activity and regulate the phagocytic activities of macrophages.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at 4°C.

Application Notes

Application

Flow cytometry	Routinely Tested
Western blot	Reported
Immunohistochemistry	Reported
Fluorescence microscopy	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
553927	Purified Rat IgG2a, κ Isotype Control	0.5 mg	R35-95
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Gresham HD, Dale BM, Potter JW, et al. Negative regulation of phagocytosis in murine macrophages by the Src kinase family member, Fgr. *J Exp Med*. 2000; 191(3):515-528. (Biology)
 Jiang P, Lagenaur CF, Narayanan V. Integrin-associated protein is a ligand for the P84 neural adhesion molecule. *J Biol Chem*. 1999; 274(2):559-562. (Clone-specific: Immunofluorescence, Immunohistochemistry)
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Mi ZP, Jiang P, Weng WL, Lindberg FP, Narayanan V, Lagenaur CF. Expression of a synapse-associated membrane protein, P84/SHPS-1, and its ligand, IAP/CD47, in mouse retina. *J Comp Neurol.* 2000; 416(3):335-344.(Clone-specific: Immunofluorescence, Immunohistochemistry)

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Reinhold MI, Lindberg FP, Plas D, Reynolds S, Peters MG, Brown EJ. In vivo expression of alternatively spliced forms of integrin-associated protein (CD47). *J Cell Sci.* 1995 November; 108(Pt 11):3419-3425.(Biology)