

CD45 Monoclonal Antibody (BHPT-1), PE-Cyanine5

Catalog NumberMA1-12467

Product data sheet

Details		Species Reactivity	
Size	100 Tests	Published species	Rat
Host/Isotope	Mouse / IgG1	Tested Applications	Dilution *
Class	Monoclonal	Flow Cytometry (Flow)	5 µL/test
Type	Antibody	Published Applications	
Clone	BHPT-1	Flow Cytometry (Flow)	See 1 publications below
Immunogen	human peripheral blood monocytes from a rheumatoid arthritis patient	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Conjugate	PE-Cyanine5		
Form	Liquid		
Storage Conditions	4° C, store in dark, DO NOT FREEZE!		

Background/Target Information

CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase (PTP) ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. CD45 is absent on non-hematopoietic cell lines, normal and malignant, non-hematopoietic tissues. CD45 glycoprotein is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases. CD45 protein exists as multiple isoforms as a result of alternative splicing, differ in their extracellular domains but share identical transmembrane and cytoplasmic domains. CD45RA is an isoform of the CD45 complex and has restricted expression between different subtypes of lymphoid cells. CD45 isoforms differ in their ability to translocate into the glycosphingolipid-enriched membrane domains and their expression depends on cell type and physiological state of the cell. CD45 has been shown to be an essential regulator of T- and B-cell antigen receptor signaling and suppresses JAK kinases to regulate cytokine receptor signaling. CD45 is also important in promoting cell survival by modulating integrin-mediated signal transduction pathway, DNA fragmentation during apoptosis and inhibition or upregulation of various immunological functions.

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1 Flow Cytometry References

Species / Dilution	Summary
Rat / 1:50	MA1-12467 was used in flow cytometry to study the role of diffusible molecules in the synergistic effects of bone marrow stromal cells and Schwann cells in promoting the repair of peripheral nerve damage
	Journal of tissue engineering and regenerative medicine (2012; 6: 579)
	"Bone marrow stromal and Schwann cells from adult rats can interact synergistically to aid in peripheral nerve repair even without intercellular contact in vitro." Author(s):Zhou LN,Zhang JW,Wang JC,Lei WL,Liu XL,Zhou LH PubMed Article URL: http://dx.doi.org/10.1002/term.467

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