

# CD45RA Monoclonal Antibody (MEM-56), Qdot™ 705

Catalog NumberQ22155

Product data sheet

Details		Tested Applications	Dilution *
Size	25 µL	Flow Cytometry (Flow)	Assay-dependent
Host/Isotope	Mouse / IgG2b	<div>* 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.</div>	
Class	Monoclonal		
Type	Antibody		
Clone	MEM-56		
Immunogen	Human CD45RA		
Conjugate	Qdot™ 705		
Form	Liquid		
Storage Conditions	4° C		

Background/Target Information

CD45RA is an isoform of the CD45 complex and has restricted expression between different subtypes of lymphoid cells. CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. 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 and these isoforms differ in their extracellular domains, however, they share identical transmembrane and cytoplasmic domains. 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. Besides the role in immunoreceptor signaling, CD45 is important in promoting cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis. CD45 is expressed on cells of the human hematopoietic lineage, with the exception of mature red cells and is not detected on differentiated cells of other tissues. It is likely that CD45 plays an important role in signal transduction, inhibition or upregulation of various immunological functions. Diseases associated with CD45 dysfunction include severe combined immunodeficiency and Hepatitis C.

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