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CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SPM569 + SPM570]
Catalog # AH10700

Product Information

Application	IF, FC, IHC-P
Primary Accession	P08575
Other Accession	5788, 654514
Reactivity	Human, Dog
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa + Mouse / IgG1, kappa
Clone Names	SPM569 + SPM570
Calculated MW	147486

Additional Information

Gene ID	5788
Other Names	Receptor-type tyrosine-protein phosphatase C, 3.1.3.48, Leukocyte common antigen, L-CA, T200, CD45, PTPRC, CD45
Application Note	IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTPRC (HGNC:9666)
Synonyms	CD45
Function	Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor (PubMed:35767951). Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN. Dephosphorylates LYN, and thereby modulates LYN activity (By

	similarity). Interacts with CLEC10A at antigen presenting cell-T cell contact; CLEC10A on immature dendritic cells recognizes Tn antigen- carrying PTPRC/CD45 receptor on effector T cells and modulates T cell activation threshold to limit autoreactivity.
Cellular Location	Cell membrane; Single-pass type I membrane protein. Membrane raft. Synapse. Note=Colocalized with DPP4 in membrane rafts.
Tissue Location	Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

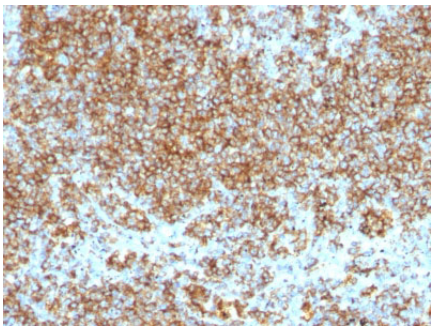
Background

Recognizes the CD45 leukocyte common antigen (LCA) family which is comprised of at least four isoforms of membrane glycoproteins (220, 205, 190, 180kDa) expressed on hematopoietic cell lines but absent on non-hematopoietic cell lines, normal and malignant non-hematopoietic tissues. The intracellular portions of these molecules have protein phosphatase activity and are involved in regulation of transmembrane signals. Antibody to CD45 is useful in differential diagnosis of lymphoid tumors from non-hematopoietic undifferentiated neoplasms. A positive result with this MAb is highly indicative of lymphoid or myeloid origin. Certain types of lymphoid neoplasms may lack CD45 (Hodgkin lymphoma, some T-cell lymphomas, and some leukemias) so its absence does not rule out a hematolymphoid tumor. This antibody is expressed almost exclusively by cells of hematopoietic lineage and is present in most benign and malignant lymphocytes as well as plasma cell precursors.

References

Michie SA et. al. American Journal of Clinical Pathology, 1987, 88(4):457-62. | Gatter KC et. al. Lancet, 1985 Jun 8, 1(8441):1302-5

Images



Formalin-fixed, paraffin-embedded human Lymphoma stained with CD45 Monoclonal Antibody (SPM569+SPM570).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.