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Anti-CD81 / TAPA-1 Antibody

Mouse Monoclonal Antibody
Catalog # AH13650

Product Information

Application	WB, IHC-P, IF, FC
Primary Accession	P60033
Other Accession	54457
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	1.3.3.22
Calculated MW	25809

Additional Information

Gene ID	975
Other Names	CD81; Target of the antiproliferative antibody 1 (TAPA-1); Tetraspanin-28; Tspan-28
Application Note	Functional Studies (Order Ab without Azide);,Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (0.5-1ug/ml); ,Western Blotting (0.5-1.0ug/ml for 2 hours at RT);,Immunohistology (Formalin-fixed) (0.5-1ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
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	Anti-CD81 / TAPA-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD81 {ECO:0000303|PubMed:8766544, ECO:0000312|HGNC:HGNC:1701}
Function	Structural component of specialized membrane microdomains known as tetraspanin-enriched microdomains (TERMs), which act as platforms for receptor clustering and signaling. Essential for trafficking and compartmentalization of CD19 receptor on the surface of activated B cells

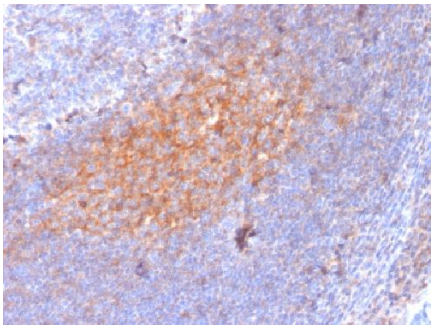
	(PubMed:16449649, PubMed:20237408, PubMed:27881302). Upon initial encounter with microbial pathogens, enables the assembly of CD19-CR2/CD21 and B cell receptor (BCR) complexes at signaling TERMs, lowering the threshold dose of antigen required to trigger B cell clonal expansion and antibody production (PubMed:15161911, PubMed:20237408). In T cells, facilitates the localization of CD247/CD3 zeta at antigen-induced synapses with B cells, providing for costimulation and polarization toward T helper type 2 phenotype (PubMed:22307619, PubMed:23858057, PubMed:8766544). Present in MHC class II compartments, may also play a role in antigen presentation (PubMed:8409388, PubMed:8766544). Can act both as positive and negative regulator of homotypic or heterotypic cell-cell fusion processes. Positively regulates sperm-egg fusion and may be involved in acrosome reaction (By similarity). In myoblasts, associates with CD9 and PTGFRN and inhibits myotube fusion during muscle regeneration (By similarity). In macrophages, associates with CD9 and beta-1 and beta-2 integrins, and prevents macrophage fusion into multinucleated giant cells specialized in ingesting complement-opsonized large particles (PubMed:12796480). Also prevents the fusion of mononuclear cell progenitors into osteoclasts in charge of bone resorption (By similarity). May regulate the compartmentalization of enzymatic activities. In T cells, defines the subcellular localization of dNTPase SAMHD1 and permits its degradation by the proteasome, thereby controlling intracellular dNTP levels (PubMed:28871089). Also involved in cell adhesion and motility. Positively regulates integrin-mediated adhesion of macrophages, particularly relevant for the inflammatory response in the lung (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Note=Associates with CLDN1 and the CLDN1-CD81 complex localizes to the basolateral cell membrane
Tissue Location	Expressed on B cells (at protein level) (PubMed:20237408). Expressed in hepatocytes (at protein level) (PubMed:12483205). Expressed in monocytes/macrophages (at protein level) (PubMed:12796480). Expressed on both naive and memory CD4- positive T cells (at protein level) (PubMed:22307619)

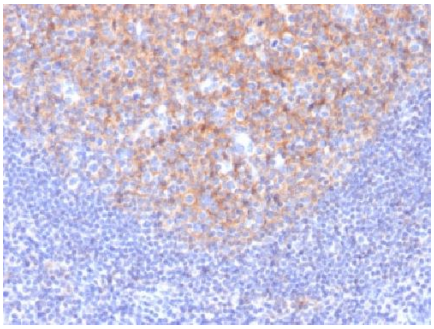
Background

Recognizes a protein of 26kDa, identified as CD81 (Workshop VI; Code CD81.1)). CD81 has a very broad cellular distribution, being expressed on T- and B-lymphocytes, NK cells, thymocytes, eosinophils, fibroblasts, epithelial and endothelial cells. Neutrophils, erythrocytes and platelets are negative, while monocytes are variably positive. CD81 is a member of a family of tetraspans transmembrane proteins, including CD9, CD37, CD53, CD63, and CD82. It associates with CD19, CD21, Leu 13, and integrins on cell membrane and is involved in signal transduction in B lymphocyte development and cell adhesion. CD81 also acts as a receptor for the envelope protein E2 of chronic hepatitis C virus. Antibodies to CD81 have anti-proliferative effects on different lymphoid cell lines, particularly those derived from large cell lymphomas.

Images

Formalin-fixed, paraffin-embedded human Lymph Node stained with CD81 Mouse Monoclonal Antibody (1.3.3.22).





Formalin-fixed, paraffin-embedded human Tonsil stained with CD81 Mouse Monoclonal Antibody (1.3.3.22).

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