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# CD81 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6631B

## Product Information

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| **Application** | WB, IHC-P, FC, E |
| **Primary Accession** | P60033 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Rat, Bovine, Canine, Chicken |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Calculated MW** | 25809 |
| **Antigen Region** | 176-203 |

## Additional Information

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| **Gene ID** | 975 |
| **Other Names** | CD81 antigen, 26 kDa cell surface protein TAPA-1, Target of the antiproliferative antibody 1, Tetraspanin-28, Tspan-28, CD81, CD81, TAPA1, TSPAN28 |
| **Target/Specificity** | This CD81 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 176-203 amino acids from the C-terminal region of human CD81. |
| **Dilution** | WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | CD81 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **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

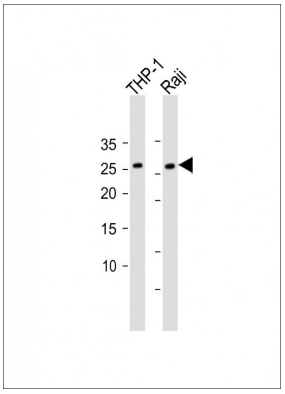
CD81 is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. Most of these members are cell-surface proteins that are characterized by the presence of four hydrophobic domains. The proteins mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. This protein is a cell surface glycoprotein that is known to complex with integrins. This protein appears to promote muscle cell fusion and support myotube maintenance. Also it may be involved in signal transduction.

## References

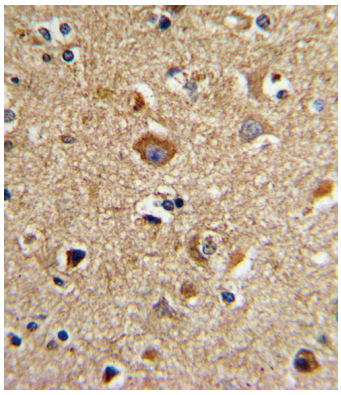
Weng,J., J. Virol. 83 (15), 7467-7474 (2009)
Rocha-Perugini,V., BMC Microbiol. 9, 111 (2009)

## Images

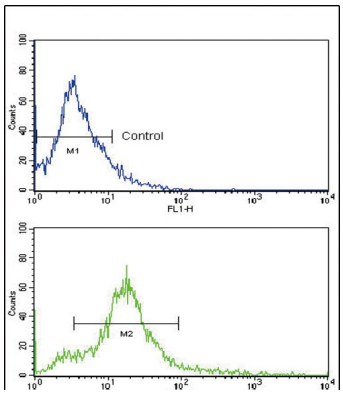
All lanes: Anti-CD81 Antibody (C-term) at 1:1000 dilution Lane 1: THP-1 whole cell lysate Lane 2: Raji whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat




Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 26 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human brain tissue with CD81 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.




Flow cytometric analysis of 293 cells using CD81 Antibody (C-term) (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

## Citations

- Label-free Quantitative Detection of Tumor-derived Exosomes through Surface Plasmon Resonance Imaging.
- Exosomes from BM-MSCs increase the population of CSCs via transfer of miR-142-3p.

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