

## CD81 Antibody (C-term) Blocking Peptide

Synthetic peptide  
Catalog # BP6631b

### Specification

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#### CD81 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession [P60033](#)

#### CD81 Antibody (C-term) Blocking Peptide - Additional Information

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

The synthetic peptide sequence used to generate the antibody [AP6631b](/products/AP6631b) was selected from the C-term region of human CD81. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

#### Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

#### Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

#### CD81 Antibody (C-term) Blocking Peptide - 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](http://www.uniprot.org/citations/16449649), PubMed: [20237408](http://www.uniprot.org/citations/20237408), PubMed: [27881302](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15161911), PubMed: [20237408](http://www.uniprot.org/citations/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:<a href="http://www.uniprot.org/citations/22307619" target="\_blank">22307619</a>, PubMed:<a href="http://www.uniprot.org/citations/23858057" target="\_blank">23858057</a>, PubMed:<a href="http://www.uniprot.org/citations/8766544" target="\_blank">8766544</a>). Present in MHC class II compartments, may also play a role in antigen presentation (PubMed:<a href="http://www.uniprot.org/citations/8409388" target="\_blank">8409388</a>, PubMed:<a href="http://www.uniprot.org/citations/8766544" target="\_blank">8766544</a>). 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:<a href="http://www.uniprot.org/citations/12796480" target="\_blank">12796480</a>). 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:<a href="http://www.uniprot.org/citations/28871089" target="\_blank">28871089</a>). 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)

#### CD81 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

#### CD81 Antibody (C-term) Blocking Peptide - Images

#### CD81 Antibody (C-term) Blocking Peptide - 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.

#### CD81 Antibody (C-term) Blocking Peptide - References

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