

CD81 Protein, Human (HEK293, His)

Cat. No.:	HY-P74264
Synonyms:	CD81 antigen; CD81; CVID6; TAPA-1; TSPAN28
Species:	Human
Source:	HEK293
Accession:	P60033 (F113-K201)
Gene ID:	975
Molecular Weight:	10-13 kDa

PROPERTIES

AA Sequence	F V N K D Q I A K D V K Q F Y D Q A L Q Q A V V D D D A N N A K A V V K T F H E T L D C C G S S T L T A L T T S V L K N N L C P S G S N I I S N L F K E D C H Q K I D D L F S G K
Biological Activity	Immobilized Human CD81 at 1 µg/mL (100 µL/well) can bind Anti-CD81 Antibody, The ED ₅₀ is 31.58 ng/mL, corresponding to a specific activity is 3.17×10 ⁴ U/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	CD19 receptor plays a crucial role in the trafficking and compartmentalization of activated B cells. It allows the assembly of CD19-CR2/CD21 and B cell receptor (BCR) complexes at signaling TERMS, leading to a lower threshold dose of antigen required to trigger B cell clonal expansion and antibody production. This receptor also facilitates the localization of CD247/CD3 zeta at antigen-induced synapses with B cells in T cells, providing costimulation and polarization toward T helper type 2 phenotype. Additionally, CD19 is present in MHC class II compartments and may play a role in antigen presentation. It can act as both a positive and negative regulator of cell-cell fusion processes. CD19 positively regulates
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sperm-egg fusion and may be involved in the acrosome reaction. In myoblasts, it associates with CD9 and PTGFRN to inhibit myotube fusion during muscle regeneration. In macrophages, CD19 associates with CD9 and beta-1 and beta-2 integrins to prevent macrophage fusion into multinucleated giant cells specialized in ingesting complement-opsonized large particles. It also prevents the fusion of mononuclear cell progenitors into osteoclasts responsible for bone resorption. CD19 may also regulate the compartmentalization of enzymatic activities. In T cells, it defines the subcellular localization of dNTPase SAMHD1 and permits its degradation by the proteasome, thereby controlling intracellular dNTP levels. CD19 is also involved in cell adhesion and motility, positively regulating integrin-mediated adhesion of macrophages, particularly in the inflammatory response in the lung. Additionally, CD19 acts as a receptor for hepatitis C virus (HCV) in hepatocytes, in association with CLDN1 and the CLDN1-CD81 receptor complex, essential for HCV entry into host cells.

Caution: Product has not been fully validated for medical applications. For research use only.

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