

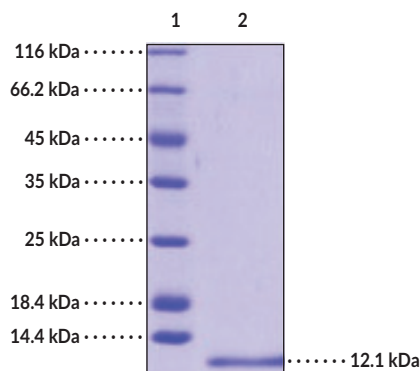
PRODUCT INFORMATION

TAPA-1/CD81 Extracellular Domain (human, recombinant; His-tagged)
Item No. 37019

Overview and Properties

Synonyms: CVID6, TAPA-1, Target of Antiproliferative Antibody 1, TSPAN28
Source: Recombinant human N-terminal His-tagged CD81 expressed in HEK293 cells
Amino Acids: 113-201
Uniprot No.: P60033
Molecular Weight: 12.1 kDa
Storage: -80°C
Stability: ≥1 year
Purity: ≥90% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers

Lane 2: TAPA-1/CD81 Extracellular Domain

SDS-PAGE Analysis of TAPA-1/CD81 Extracellular Domain. This protein has a calculated molecular weight of 12.1 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

CD81, also known as target of antiproliferative antibody 1 (TAPA-1), is a member of the tetraspanin protein family with roles in B cell biology and T cell activation and as a virus host factor.^{1,2} It is composed of four transmembrane segments, which are packed as two pairs of helices, and an extracellular loop at the outer membrane leaflet that, unlike other tetraspanin proteins, is non-glycosylated and subject to post-translational acylation.^{2,3} On the surface of B cells, CD81 associates with CD19 and CD21 to facilitate adhesion and reduce the threshold for B cell receptor activation, as well as with MHC class II molecules as a component of the B cell surface receptor complex.³⁻⁵ On T cells, CD81 interacts with CD4 and CD8 and functions as a co-stimulator of naïve T cell activation in conjunction with CD3 and CD28.^{1,6} CD81 also acts as a virus host factor, and neutralization of CD81 with anti-CD81 antibodies reduces HIV-1 replication and inhibits influenza A virus uncoating and viral budding, as well as inhibits coronavirus (CoV) and hepatitis C virus (HCV) cell entry.⁷ CD81 levels are increased in several lymphoma cell lines, and antibody-driven neutralization of CD81 induces complement-dependent cytotoxicity, antibody-dependent cellular phagocytosis, and cytotoxicity in these cells.⁵ Cayman's TAPA-1/CD81 Extracellular Domain (human, recombinant; His-tagged) protein consists of 108 amino acids and has a calculated molecular weight of 12.1 kDa.

References

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4. Szöllösi, J., Horejsi, V., Bene, L., *et al.* Supramolecular complexes of MHC class I, MHC class II, CD20, and tetraspan molecules (CD53, CD81, and CD82) at the surface of a B cell line JY. *J. Immunol.* **157**(7), 2939-2946 (1996).
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