

## CD81 Protein, Rat, Recombinant

### General Information

Synonyms:	CD81 molecule
Protein Construction:	A DNA sequence encoding the rat Cd81 (NP_037219.1) (Lys116-Lys201) was expressed with two additional amino acids (Gly & Pro) at the N-terminus. Predicted N terminal: Gly
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q62745
Molecular Weight:	9.7 kDa (predicted)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

CD81, also known as TAPA-1, belongs to the transmembrane 4 superfamily, also known as the tetraspanin family. Members of this family mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. CD81 is a widely expressed cell-surface protein involved in an astonishing variety of biologic responses. It is related to adhesion, morphology, activation, proliferation, and differentiation of B, T, and other cells. On B cells CD81 is part of a complex with CD21, CD19, and Leu13. This complex reduces the

threshold for B cell activation via the B cell receptor by bridging Ag specific recognition and CD21-mediated complement recognition.

### Reference

Petracca R. et al., 2000, J Virol. 74 (10): 4824-30.

Bartosch B. et al., 2003, The Journal of Biological Chemistry. 278 (43): 41624-30.

Clark KL. et al., 2001, Journal of Immunology. 167 (9): 5115-21.

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