

## CD7 Protein, Human, Recombinant (hFc)

### General Information

Synonyms:	CD7 molecule;GP40;LEU-9;TP41;Tp40
Protein Construction:	Ala26-Pro180
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P09564
Molecular Weight:	43.19 kDa (predicted); 55-70 kDa (reducing conditions)

### QC Testing

Biological Activity:	Immobilized Human CD7, hFc Tag at 1 µg/ml (100 µl/well) on the plate. Dose response curve for Biotinylated Anti-CD7 Antibody, hFc Tag with the EC50 of 32.5 ng/ml determined by ELISA.
Purity:	> 95 % as determined by SDS-PAGE. > 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 µg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### 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

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other

functions such as cell adhesion. CD7 is a transmembrane protein that is a member of the immunoglobulin superfamily. This protein is found on thymocytes and mature T cells. It plays an essential role in T-cell interactions and also in T-cell / B-cell interaction during early lymphoid development.

### Reference

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Matesanz-Isabel J,et al.(2011) New B-cell CD molecules. Immunology Letters.134 (2): 104-12.

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