

## CD7 Protein, Human, Recombinant (His & Avi)

### General Information

Synonyms:	CD7;GP40;Tp40;CD7 molecule;LEU-9;TP41
Protein Construction:	Ala26-Pro180
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P09564
Molecular Weight:	19.3 kDa (predicted). Due to glycosylation, the protein migrates to 32-45 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Immobilized Human CD7, His Tag at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Anti-CD7 Antibody, hFc Tag with the EC50 8.4ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled 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

CD7, also known as Leu-9, is an approximately 40 kDa glycosylated and palmitoylated transmembrane protein in the immunoglobulin superfamily. CD7 is expressed on T cells, NK cells, myeloid progenitor cells, and CD19 B progenitor cells. Among CD8 T cells, the CD7-bright population preferentially contains naïve and memory cells, while more weak expressors are primarily effector cells.

Reference

Gomes-Silva D, et al. CD7-edited T cells expressing a CD7-specific CAR for the therapy of T-cell malignancies[[]].  
Blood, 2017:blood-2017-01-761320.

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