

## Technical Data Sheet

### Biotin Human CD7 Protein (C-His-Avi)

**Catalog Number:** 805403, 805404  
**Size:** 25 ug, 100 ug  
**Target Name:** CD7, GP40, TP41, LEU-9, Tp40  
**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI  
**Format:** Liquid, Biotinylated  
**Expression Host:** CHO  
**Target Name:** CD7, GP40, TP41, LEU-9, Tp40  
**Species:** Human  
**Sources:** Recombinant Human CD7 (Ala26-Pro180) with C-terminus His-Avi tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.  
**Accession Number:** P09564  
**Molecular Weight:** The protein has a predicted molecular weight of 18 kDa. Under DTT-reducing conditions, it migrates at approximately 30-40 kDa on SDS-PAGE.  
**Affinity Tag:** C-His-Avi  
**Purity:** >95% based on SDS-PAGE under reducing condition  
**Regulatory Status:** RUO  
**Formulation:** 1xPBS buffer, pH7.4, 0.22 µm filtered  
**Endotoxin level:** Not tested  
**Protein Concentration:** 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.  
**Storage and Handling:** Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

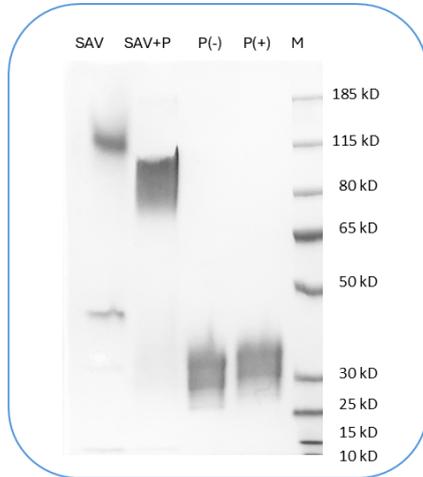
#### Background Information

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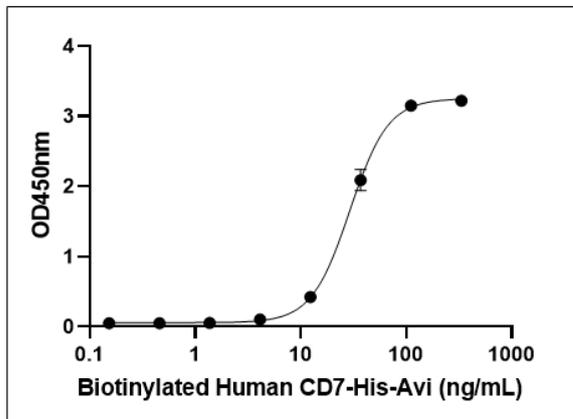
CD7, also known as GP40, LEU-9, and TP41, is a 40 kD transmembrane glycoprotein of the immunoglobulin superfamily. It is expressed on thymocytes, T cells, NK cells, myeloid precursor cells, and some leukemia cells. CD7 plays a key role in T cell interactions and early lymphoid development. It activates the PI3K pathway through its intracellular YEEM motif and induces mitogenesis and IL-2 production when treated with anti-CD3 or PMA. CD7 is overexpressed in classical Hodgkin lymphoma and T-cell acute lymphoblastic leukemia (T-ALL), and is a target for CAR T-cell therapies.

**Product Data**

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Human CD7 protein (C-His-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under reducing (P+) and non-reducing (P-) conditions shows the protein has a purity greater than 95%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of the CD7 protein exceeds 95%.



Human SECTM1 (C-Fc) protein is coated at 1 µg/mL (100ng/well). Biotinylated Human CD7 Protein (C-His-Avi) can detect the SECTM1 protein in the dose dependent manner. The ED<sub>50</sub> is about 20-60 ng/mL.