

## Technical Data Sheet

### Human B7-1 (CD80) (C-His)

**Catalog Number:** 816701, 816702

**Size:** 25 ug, 100 ug

**Target Name:** CD80, B7-1, B7, BB1

**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI

**Format:** Liquid, Purified

**Expression Host:** CHO

**Species:** Human

**Sources:** Recombinant Human B7-1 (CD80) (Val35-Asn242) with C-terminus His-tag is expressed in CHO cell.

**Accession Number:** Q68D85

**Molecular Weight:** The protein has a predicted molecular weight of 25.5 kDa. Under DTT-reducing conditions, it migrates at approximately 45 kDa on SDS-PAGE.

**Affinity Tag:** C-His

**Purity:** >95% based on SDS-PAGE under reducing condition

**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.

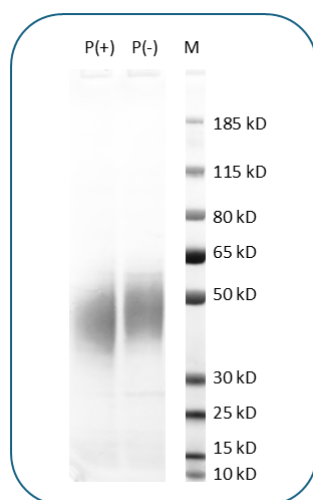
#### Background Information

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B7-1, also known as CD80, is a cell surface glycoprotein in the immunoglobulin superfamily, expressed on activated B cells, macrophages, and dendritic cells. It interacts with the costimulatory receptors CD28 and CTLA-4 on T cells, playing a pivotal role in regulating T cell activation, tolerance, cytokine production, and the generation of cytotoxic T lymphocytes. Through its interactions with CD28 and CTLA-4, CD80 is involved in both enhancing and inhibiting immune responses, thereby maintaining immune balance. This B7/CD28/CTLA-4 pathway is crucial for controlling immune function and is considered a promising target for therapeutic interventions in autoimmune diseases and cancer.

## Product Data

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Human B7-1 (CD80) protein (C-His) on SDS-PAGE under reducing condition (P+) and non-reducing condition (P-). The gel was stained for 1 hour with BlinkBlue (catalog 700102). The purity of this protein appears to be greater than 90% based on reducing conditions.