

## Technical Data Sheet

### Biotinylated Human Mesothelin (E296-G580) Protein (C-His-Avi)

**Catalog Number:** 801303, 801304

**Size:** 25 ug, 100 ug

**Target Name:** Mesothelin, MPF, MSLN

**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI

**Format:** Liquid, Biotinylated

**Expression Host:** HEK293

**Species:** Human

**Sources:** Human Mesothelin protein (Accession # AAH09272.1) (Glu296-Gly580) with C-terminus His-Avi tag is expressed in HEK293 cells. This protein was site-specifically labeled with Biotin by BirA ligase.

**Accession Number:** Q13421

**Molecular Weight:** The protein has a predicted molecular weight of 36kDa. Under DTT-reducing conditions, it migrates at approximately 35-45 kDa.

**Affinity Tag:** C-His-Avi

**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.

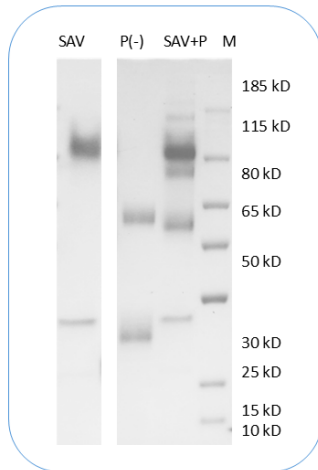
#### Background Information

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Mesothelin (MSLN), also known as CAK1, is a 70 kDa cell-surface protein cleaved into MPF (30 kDa) and mesothelin (40 kDa). MPF acts as a cytokine, while mesothelin is membrane-bound via glycosylphosphatidylinositol. It is overexpressed in various cancers, including mesotheliomas and ovarian cancer, and interacts with MUC16/CA-125, a cancer biomarker. Elevated mesothelin levels in serum make it a target for diagnostics and therapies, such as the recombinant immunotoxin SS1P, which has shown promise in clinical trials.

#### Product Data

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Human Mesothelin (E296-G580, C-His-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under 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 Mesothelin protein exceeds 80%.