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**Product Name:** Human TROP-2 Protein Dimer, Flag-His Tag

**Product Code:** CSP-24041-02

**FOR RESEARCH USE ONLY (RUO)**

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**Protein Name:** TROP-2, Protein Dimer

**Alternate Name(s):** TACSTD2, epithelial glycoprotein-1, EGP-1, EGP1, GA733-1, GA7331, pancreatic carcinoma marker protein GA733-1/GA733, gastrointestinal tumor-associated antigen GA7331, GP50, membrane component chromosome 1 surface marker 1, M1S1, TROP2, tumor-associated calcium signal transducer 2, tumor associated calcium signal transducer 2, trophoblast cell surface antigen 2, CAA1, TTD2

**Expression Host**  
HEK293T

**Amino Acid Range**  
H27-T274

**Protein Construct**

TROP-2 dimer protein contains a TROP-2 extracellular domain (UniProt# P09758, amino acids His27-Thr274) fused with a dimer motif followed by a tandem Flag-His tag at the C-terminus. Expressed in HEK293T cell line.

**SDS-Page Molecular Weight**

72 kDa. The migration range of the dimer under non-reducing conditions is 90-200 kDa on SDS PAGE.

**Purity**

Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

**Shipping Conditions**

Frozen Ice Packs

**Stability & Storage**

-20°C

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4 with 10% trehalose as a protectant

**Reconstitution of lyophilized product**

For best performance, we strongly recommend you reconstitute the lyophilized product with deionized water to a stock solution of 500 µg/mL.

Solubilize for 20 minutes at room temperature with occasional gentle mixing. Avoid shaking or vortexing.

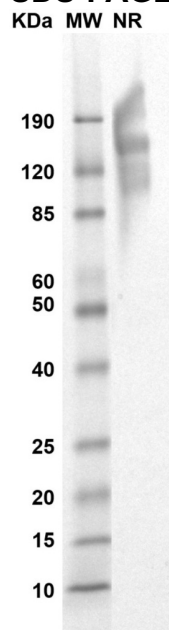
For 25µg product size:

Reconstitute with 50 µL sterile deionized water.

For 100µg product size:

Reconstitute with 200 µL sterile deionized water.

## SDS-PAGE

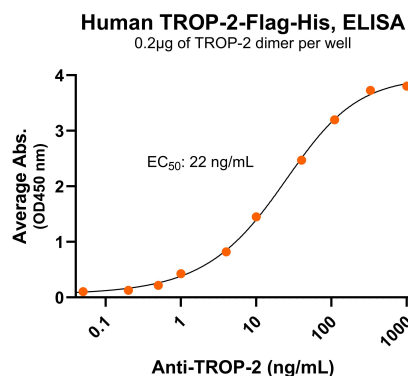


MW: Molecular Weight marker reduced condition

NR: TROP-2 dimer under non-reducing condition

The migration range of the dimer under non-reducing conditions is 90-200 kDa on SDS PAGE.

## Antibody Binding



Immobilized TROP-2-Flag-His dimer protein (Cat. No. CSP-24041-02) at 2 µg/mL (100 µL/well) can bind anti-human TROP-2 monoclonal antibody with half maximal effective concentration (EC<sub>50</sub>) range of 10.9-43.6 ng/mL (QC tested).

## **Background**

Human TROP-2 (trophoblast cell surface antigen 2) is a cell-surface type I transmembrane glycoprotein expressed in epithelial cells of various tissues. TROP-2 is also known as TROP2, TACSTD2, EGP-1, pancreatic carcinoma marker protein GA733–1/GA733, gastrointestinal tumor-associated antigen GA7331, GP50, M1S1, tumor-associated calcium signal transducer 2, CAA1, and TTD2. TROP-2 exists as a monomer on the cell surface but can form dimers or oligomers on cancer cells enhancing its role in cancer progression. TROP-2 contains an extracellular domain, a single transmembrane helix, and a cytoplasmic tail. The extracellular domain is comprised of three subdomains: a cysteine-rich domain, a thyroglobulin type-1 domain, and a cysteine-poor domain. TROP-2 is normally involved in the maintenance of epithelial tissue integrity. It is overexpressed in many cancers including breast cancer, non-small-cell lung cancer, thyroid cancer, gastric cancer, pancreatic cancer, and ovarian cancer. TROP-2 overexpression is involved in cancer cell growth, proliferation, invasion, migration, and survival of cancer cells, and is associated with tumor aggressiveness and poor prognosis. TROP-2 is an emerging target of cancer therapeutics.