Product Name: Human EpCAM Protein Dimer, His-Avi Tag

Product Code: CSP-26323-03

FOR RESEARCH USE ONLY (RUO)

Protein Name: EpCAM, Protein Dimer

Alternate Name(s): Cluster of Differentiation 326, CD326, DIAR5, EGP-2, EGP314, EGP40, ESA, HNPCC8, KS1/4, KSA, M4S1, MIC18, MK-1, TACSTD1, TROP1, epithelial cell adhesion molecule, BerEp4, MOC-31, Ber-Ep4

Expression Host
HEK293T

Amino Acid Range
Q24 - K265

Protein Construct
EpCAM dimer protein contains an EpCAM extracellular domain (UniProt# P16422) fused with a proprietary cis-dimer motif followed by a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
75 kDa. Migration range of the dimer protein with glycosylation under non-reducing condition is 120-190 kDa on SDS PAGE

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

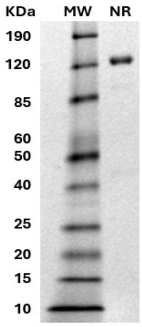
Shipping Conditions
Product is shipped at ambient temperature.

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

Stability & Storage
On receipt, store at -20 C or lower for long term storage.
This product is stable at:
-20 to -70 C for 12 months from date of receipt in lyophilized state.
-70 C for 3 months after reconstitution under sterile conditions.
Avoid repeated freeze-thaw cycles

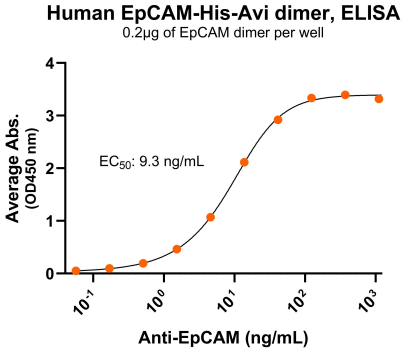
Reconstitution of lyophilized product
For best performance, we strongly recommend you reconstitute the lyophilized product with deionized water to a stock solution of 500 μg/mL.
Solubilize for 20 minutes at room temperature with occasional gentle mixing. Avoid shaking or vortexing.
For 25μg product size:
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: EpCAM dimer under non-reduced condition
Migration range of the dimer protein with glycosylation under non-reducing condition is 120-190 kDa on SDS PAGE

Antibody Binding



Immobilized human EpCAM-His-Avi dimer protein (CSP-26323-03) at 2 μg/mL (100 μL/well) can bind anti-human EpCAM monoclonal antibody with half maximal effective concentration (EC50) range of 4.7-18.6 ng/mL (QC tested).

Background

Human Epithelial Cell Adhesion Molecule (EpCAM) is a Type I transmembrane glycoprotein mediating Ca2+-independent homotypic cell–cell adhesion in epithelial cells. EpCAM is also known as Cluster of Differentiation 326 (CD326). EpCAM contains an extracellular domain with epidermal growth factor (EGF) and thyroglobulin repeat-like domains sometimes referred to collectively as “EpEX” followed by a single transmembrane domain, and a short intracellular domain sometimes referred to as “EpICD”. High-resolution X-ray crystallography shows that the extracellular part of human EpCAM (EpEX) naturally assembles into a cis-homodimer. EpCAM is highly overexpressed in the vast majority of human carcinomas, including colorectal, breast, gastric, prostate, and lung cancers. Due to it being upregulated in many carcinomas and being exclusively expressed in epithelial cells and epithelial-derived neoplasms EpCAM is a diagnostic marker for several cancers. EpCAM also appears to play a role in tumorigenesis and metastasis of carcinomas, making it an emerging target of cancer therapeutics.