Data Sheet (Cat.No.TMPY-06760)

TargetMol

CEACAM6 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	carcinoembryonic antigen-related cell adhesion molecule 6 (non-specific cross reacting antigen);CEA;NCA;CEAL;CD66c
Protein Construction:	A DNA sequence encoding the Human CEACAM6 (NP_002474.3) (Met1-Gly320) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Lys 35
Species:	Human
Expression Host:	HEK293 Cells
Accession:	NP_002474.3
Molecular Weight:	57.94 kDa (predicted); 88.66 kDa (reducing conditions)

QC Testing

Biological Activity:	1.Loaded TPP-3310 derived anti-CEACAM-6/CD66c antibody, human IgG1 on AR2G Biosensor, can bind Recombinant Human CEACAM-6/CD66c Protein, hFc Tag (Cat#TMPY-06760) with an affinity constant of 1.240 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested). 2.Immobilized Recombinant Human CEACAM6 Protein (Fc Tag) (Cat#TMPY-06760) at 1 μg/mL (100 μL/well) can bind TPP-3310 derived Anti-CEACAM-6 antibody, the EC50 is 7.0-21.5 ng/mL (QC tested).
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Carcinoembryonic antigen-related cell adhesion molecule 6 (CEACAM6), also known as nonspecific crossreacting antigen (NCA) and CD66c, is one of seven human CEACAM family members within the immunoglobulin superfamily. It s a glycosylphosphatidylinositol-linked immunoglobulin superfamily member that is overexpressed in a variety of human cancers, including colon, breast and lung and is associated with tumourigenesis, tumour cell adhesion, invasion and metastasis. CEACAM6 is a unique mediator of migration and invasion of drug resistant oestrogen-deprived breast cancer cells, and this protein could be an important biomarker of metastasis. CEACAM6 is expressed by granulocytes and their progenitors. It is also expressed by epithelia of various organs and is upregulated in pancreatic and colon adenocarcinomas, as well as hyperplastic polyps. Resistance to adhesion-related apoptosis in tumor cells is conferred in the condition of CEACAM6 overexpression.

Reference

Duxbury MS, et al. (2004) Overexpression of CEACAM6 promotes insulin-like growth factor I-induced pancreatic adenocarcinoma cellular invasiveness. Oncogene. 23(34): 5834-42.
Lewis-Wambi JS, et al. (2008) Overexpression of CEACAM6 promotes migration and invasion of oestrogen-deprived breast cancer cells. Eur J Cancer. 44(12): 1770-9.