

# Human CEACAM5 / CD66e Protein (His & Fc Tag)

Catalog Number: 11077-H03H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD66e; CEA

### Protein Construction:

A DNA sequence encoding the mature form of human CEACAM5 (NP\_004354.2) (Met 1-Ala 685) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Lys 35

### Molecular Mass:

The recombinant human CEACAM5/Fc is a disulfide-linked homodimer after removal of the signal peptide. The reduced monomer consists of 899 amino acids and has a predicted molecular mass of 99.4 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhCEACAM5/Fc monomer is approximately 160-180 kDa due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

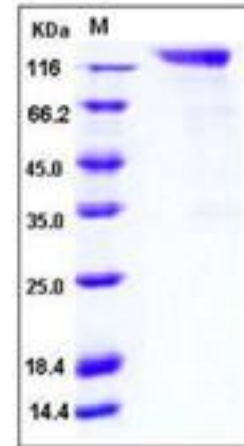
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

CEACAM5, also known as CEA or D66e, belongs to the large CEACAM subfamily of immunoglobulin superfamily. CEACAM5 is expressed primarily by epithelial cells, and is synthesized as a glycoprotein with a MW of 180 kDa comprising 60% carbohydrate. CEACAM5 contains one Ig-like V-type domain at the N-terminus, followed by six Ig-like C2-type domain and a GPI anchor, and exists as a homodimer. CEACAM5 and CEACAM6 are overexpressed in many cancers and are associated with adhesion and invasion. CEACAM5 can mediate cell-cell adhesion through homotypic and heterotypic interactions. It functions as a homotypic intercellular adhesion molecule and serves as a widely used tumor marker, since it is expressed at higher levels in tumorous tissues than in corresponding normal tissues. CEACAM5 has also been shown to contribute to tumorigenicity by inhibiting cellular differentiation. In addition, CEACAM5 is identified as the host receptor for the Dr family of adhesins of E.Coli, and the binding of E.coli Dr adhesins leads to dissociation of the CEACAM5 homodimer.

## References

1.Baczyska D, *et al.* (2003) The tumorigenic potential of human CX-1 colon adenocarcinoma cells depends on carcinoembryonic antigen (CEACAM5) expression. *Cell Mol Biol Lett.* 8(2): 471-86. 2.Blumenthal RD, *et al.* (2005) Inhibition of adhesion, invasion, and metastasis by antibodies targeting CEACAM6 (NCA-90) and CEACAM5 (Carcinoembryonic Antigen). *Cancer Res.* 65(19): 8809-17. 3.Liebig B, *et al.* (2005) Forced expression of deltaN-TCF-1B in colon cancer derived cell lines is accompanied by the induction of CEACAM5/6 and mesothelin. *Cancer Lett.* 223(1): 159-67.

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