Data Sheet (Cat.No.TMPY-06636)

TargetMol

CEACAM5 Protein, Mouse, Recombinant (hFc)

General Information

Synonyms:	carcinoembryonic antigen-related cell adhesion molecule 5;1600029H12Rik;Psg30
Protein Construction:	A DNA sequence encoding the human CEACAM5 (Q3UKK2-1) (Gln35-Glu947) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Gln 35
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q3UKK2-1
Molecular Weight:	129.35 kDa (predicted); 130.54 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 85 % as determined by SDS-PAGE. ≥ 90 % 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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

CEACAM5, also known as CEA or D66e, belongs to the large CEACAM subfamily of the immunoglobulin superfamily. CEACAM5 is expressed primarily by epithelial cells, and is synthesized as a glycoprotein with an 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 domains 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.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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.
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.
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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