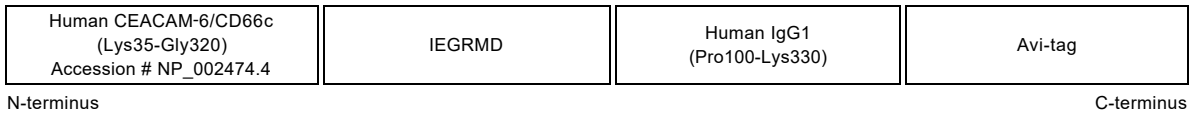
Biotinylated Recombinant Human CEACAM-6/CD66c Fc Chimera Avi-tag

Catalog Number: AVI10928

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human CEACAM-6/CD66c protein



N-terminal Sequence Analysis	Lys35
Structure / Form	Disulfide-linked homodimer Biotinylated via Avi-tag
Predicted Molecular Mass	60 kDa

SPECIFICATIONS

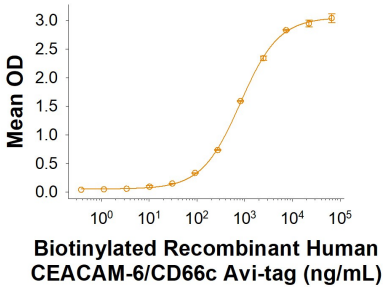
SDS-PAGE	85-100 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CEACAM-8/CD66b Protein (Catalog # 9639-CM) is immobilized at 0.5 µg/mL (100 µL/well), Biotinylated Recombinant Human CEACAM-6/CD66c Fc Chimera Avi-tag (Catalog # AVI10928) binds with an ED_{50} of 0.20-2.00 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Supplied as a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 6 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after opening. • 3 months, -20 to -70 °C under sterile conditions after opening.

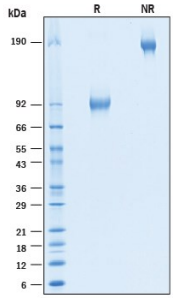
DATA

Binding Activity



Biotinylated Recombinant Human CEACAM-6/CD66c Fc Chimera Avi-tag Protein Binding Activity. When Recombinant Human CEACAM-8/CD66b Protein (Catalog # 9639-CM) is immobilized at 0.5 µg/mL (100 µL/well), Biotinylated Recombinant Human CEACAM-6/CD66c Fc Chimera Avi-tag (Catalog # AVI10928) binds with an ED_{50} of 0.200-2.00 µg/mL

SDS-PAGE



Biotinylated Recombinant Human CEACAM-6/CD66c Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human CEACAM-6/CD66c Fc Chimera Avi-tag Protein (Catalog # AVI10928) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 85-100 kDa and 170-200 kDa, respectively.

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BACKGROUND

Carcinoembryonic antigen-related cell adhesion molecule 6 (CEACAM-6), previously called nonspecific cross-reacting antigen (NCA) or CD66c, is a member of the CEACAM subfamily of glycoproteins in the immunoglobulin (Ig) superfamily primarily found in mammals. CEACAMs are transmembrane proteins used by several bacterial pathogens to bind and invade host cells (1-3). Mature, human CEACAM-6 is a GPI-linked membrane protein that contains an extracellular domain (ECD) with one N-terminal V-type Ig-like domain and two C2-type Ig-like domains (1, 3). The GPI membrane anchor is attached at the C-terminus following cleavage of the propeptide (4). The mature ECD of human CEACAM-6 shares 46% amino acid sequence identity to rat CEACAM-6 and is absent in mouse. CEACAM-6 is an intercellular adhesion molecule and forms both homotypic and heterotypic bonds with CEACAM-1, -5 and -8 through interaction of the V-type Ig-like domains (5, 6). CEACAM-6 is expressed by granulocytes and their precursors and granulocyte activation enhances surface expression by mobilizing CEACAM-6 from storage in azurophilic granules (7). CEACAM-6 is also expressed in epithelia of various organs and is upregulated in pancreatic and colon adenocarcinomas and hyperplastic polyps (7, 8). CEACAM-6 often shows aberrant expression in acute lymphocytic leukemias, and over-expression confers resistance to adhesion-related apoptosis (anoikis) in tumor cells (9-11). CEACAM-6 expression is elevated in many solid tumors including breast, pancreatic, colonic and non-small-cell lung carcinoma, and is a biomarker or potential therapeutic for other carcinomas (12, 13). CEACAM-6 has been identified as the glycoprotein receptor for influenza virus and plays a role in virus entry (14). Our Avi-tag Biotinylated CEACAM-6 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

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