Recombinant Human CEACAM-18 Fc Chimera

Catalog Number: 9869-CM

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human CEACAM-18 protein

Human CEACAM-18 (Gln31-His317) Accession # A8MTB9	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	No results obtained. Gln31 inferred from enzymatic pyroglutamate treatment revealing Ile32.
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	59 kDa

SPECIFICATIONS

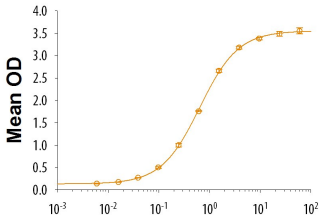
SDS-PAGE	93-105 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Galectin-3 (Catalog # 8259-GA) is immobilized at 1 µg/mL, 100 µL/well, it binds Recombinant Human CEACAM-18 Fc Chimera. The concentration of Recombinant Human CEACAM-18 Fc Chimera that produces 50% of the optimal binding response is 0.5-5 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	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, ≤ -20 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, ≤ -20 °C under sterile conditions after reconstitution.

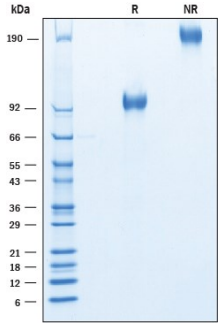
DATA

Binding Activity



Recombinant Human CEACAM-18 Fc Chimera Protein Binding Activity When Recombinant Human Galectin-3 (Human Cell-expressed) (Catalog # Catalog # 8259-GA) is coated at 1 µg/mL, 100 µL/well, Recombinant Human CEACAM-18 Fc Chimera (Catalog # 9869-CM) binds with an ED_{50} of 0.5-5 µg/mL.

SDS-PAGE



Recombinant Human CEACAM-18 Fc Chimera Protein SDS-PAGE 2 µg/lane of Recombinant Human CEACAM-18 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 93 -105 kDa and 190- 200 kDa, respectively.

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BACKGROUND

Carcinoembryonic Antigen-related Cell Adhesion Molecule 18 (CEACAM-18) is part of the CEA protein family consisting of CEACAMs and the pregnancy-specific glycoproteins (PSGs). Both CEACAM and PSG molecules have been identified in humans and belong to the much larger glycosylphosphatidylinositol (GPI)-linked immunoglobulin (Ig) superfamily (1, 2). Mature human CEACAM-18 has a 298 amino acid (aa) extracellular domain containing 2 IgC2-like and 1 IgV-like domains, a single transmembrane domain and a short cytoplasmic tail (2). CEACAM-18 is one of only five conserved CEACAMs among mouse, rat, and human (2), but mature human CEACAM-18 has low aa sequence identify with mouse and rat at 60% and 58%, respectively. Originally discovered as a biomarker for colorectal cancer (3), CEACAMs have now been associated with numerous intracellular signaling processes including cell adhesion, cell growth, recognition and differentiation, angiogenesis, and apoptosis (4-6). While the exact function of CEACAM-18 has been yet to be elucidated, it may bind pathogen receptors or other immunoregulatory members (6). CEACAM family members were identified as the major Galectin-3 receptor candidates on human neutrophils (7). Binding of carbohydrate ligands to CEACAMs may be important in the release of proinflammatory mediators (8, 9).

References:

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