
rHu CEACAM5 | CD66e/CEA protein, C-His (HEK293)

Catalog Number: bs-43141P

Concentration: Lot depend

AA Seq: 35-685/702

Predicted MW: 72 kDa

Tags: C-His

Activity: Not tested

Endotoxin: Not analyzed

Purity: > 90% as determined by SDS-PAGE

Purification: AC

Form: Lyophilized or Liquid

Storage: PBS (pH7.4).

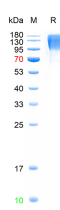
Stored at -70°C or -20°C. Avoid repeated freeze/thaw cycles.

Background: CEA-related cell adhesion molecules (CEACAM) belong to the carcinoembryonic antigen (CEA) family. It consists of seven CEACAM (CEACAM 1, CEACAM 3-CEACAM 8) and 11 pregnancy-specific glyco-protein (PSG 1-PSG 11) members. The CEA family proteins belong to the immunoglobulin (Ig) superfamily and are composed of one Ig variable-like (IgV) and a varying number (0-6) of Ig constant-like (IgC) domains. CEACAM molecules are membrane-bound either via a transmembrane domain or a glycosyl phosphatidyl inositol (GPI) anchor. CEACAM molecules are differentially expressed in epithelial cells or in leucocytes. Over-expression of CEA/ CEACAM 5 in tumors of epithelial origin is the basis of its wide-spread use as a tumor marker. The function of CEACAM family members varies widely: they function as cell adhesion molecules, tumor suppressors, regulators of lymphocyte and dendritic cell activation, receptors of Neisseria species and other bacteria.

CEA (Carcino Embryonic Antigen, CD66e) is synthesized during development in the fetal gut, and re-expressed in increased amounts in intestinal carcinomas and several other tumors. CEA is a member of carcinoembryonic antigens, immunoglobulin supergene family and consists of a single N domain (structural homology to the immunoglobulin variable) and six immunoglobulin constant-like A (A1, A2, A3) and B domains (B1, B2, B3). Antibodies to CEA are useful in identifying the origin of various metastatic adenocarcinomas and in distinguishing pulmonary adenocarcinomas (60 to 70% are CEA+) from pleural mesotheliomas (rarely or weakly CEA+). CEA is a member of a large family of glycoproteins, a useful tumor marker for adenocarcinoma, and found in adenocarcinomas of endodermally derived digestive system epithelium and fetal colon. Two subgroups of the CEA family, the CEA cell adhesion molecules and the pregnancy-specific glycoproteins, are located within a

1.2 Mb cluster on the long arm of chromosome 19. Eleven pseudogenes of the CEA cell adhesion molecule subgroup are also found in the cluster. CEA was originally described in bile ducts of liver as biliary glycoprotein. Subsequently, CEA was found to be a cell-cell adhesion molecule detected on leukocytes, epithelia, and endothelia. The encoded protein mediates cell adhesion via homophilic as well as heterophilic binding to other proteins of the subgroup. Multiple cellular activities have been attributed to the encoded protein, including roles in the differentiation and arrangement of tissue three-dimensional structure, angiogenesis, apoptosis, tumor suppression, metastasis, and the modulation of innate and adaptive immune responses. Multiple transcript variants encoding different isoforms have been reported, but the full-length nature of all variants has not been defined.

VALIDATION IMAGES



The purity of the protein is greater than 90% as determined by reducing SDS-PAGE.

PRODUCT SPECIFIC PUBLICATIONS

[IF=16] Peng Xu. et al. Unraveling the Proximity Effects of a Co-P Dual Site in Phosphorus-Coordinated Cobalt Single-Atom Nanozymes. ACS NANO. 2025;19(49):41911–41922 Other ; . 41339271

[IF=14.7] Chen Ke. et al. Atomic-scale strain engineering of atomically resolved Pt clusters transcending natural enzymes. NAT COMMUN. 2024 Sep;15(1):1-18 ; . 39333142

[IF=8.3] Fan Xia. et al. Coordination-Driven Templated Synthesis of Hierarchically Porous Zeolitic Imidazolate Frameworks for Cascade Enzyme Cycle Amplification Coupled Immunoassay. ACS APPL MATER INTER. 2024;XXXX(XXX):XXX-XXX Other ; . 39042822

[IF=8.008] Xuwen Gao. et al. Luminophore-Surface-Engineering-Enabled Low-Triggering-Potential and Coreactant-Free Electrochemiluminescence for Protein Determination. ANAL CHEM. 2023;95(17):6948–6954 Other ; . 37083347

[IF=7.7] Lihong Gao. et al. Third-generation semiconductor materials based photostimulus-responsive multifunctional immunosensor platform integrating tandem dual electrodes for triple - modal detection of lung cancer biomarkers. SENSOR ACTUAT B-CHEM. 2026 Mar;450:139277 ; . 10.1016/j.snb.2025.139277