Recombinant Human CEACAM-16

Catalog Number: 9885-CM

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human CEACAM-16 protein Met1-Gly425, with a C-terminal HA-tag Accession # Q2WEN9
N-terminal Sequence Analysis	Glu21
Predicted Molecular Mass	45 kDa

SPECIFICATIONS

SDS-PAGE	56-73 kDa, reducing conditions
Activity	Bioassay data are not available.
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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 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 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Carcinoembryonic Antigen-related Cell Adhesion Molecule 16 (CEACAM-16), or CEAL2, 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). Unique to the CEA family, CEACAM-16 is a secreted molecule lacking a recognizable transmembrane domain or GPI anchor (3). Mature human CEACAM-16 is 405 amino acids (aa), containing 2 IgC2-like domains and 2 IgV-like domains. CEACAM-16 is one of only five conserved CEACAMs among mice, rats, and humans (2). Mature human CEACAM-16 shares 90% and 89% aa identity with mouse and rat CEACAM-16, respectively. Originally discovered as a biomarker for colorectal cancer (4), CEACAMs have now been associated with numerous intracellular signaling processes including cell adhesion, cell growth, recognition and differentiation, angiogenesis, and apoptosis (5-7). CEACAM-16 is specifically expressed in the inner ear and has been shown to play a critical role in hearing. CEACAM-16 has been identified as a binding partner for alpha tectorin and specific mutations in CEACAM-16 have been linked to autosomal dominant nonsyndromic deafness (ADNSHL) (3, 8).

References:

1. Beauchemin, N. *et al.* (1999) Exp. Cell Res. **252**:243.
2. Zebhauser R. *et al.* (2005) Genomics **86**:566.
3. Zheng, J. *et al.* (2011) PNAS. **108(10)**:4218.
4. Gold P. and Freedman S.O. (1965) J Exp Med **122**:467.
5. Obrink, B. (1997) Curr Opin Cell Biol **9**:616.
6. Horst, A.K. and Wagener, C. (2004) Handb Exp Pharmacol 283.
7. Kuespert K *et al.* (2006) Curr Opin Cell Biol. **18(5)**:565.
8. Wang, H. *et al.* (2015) J Hum Genet. **60(3)**:119.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449