Recombinant Human EpCAM/TROP-1 His-tag

Catalog Number: 9277-EP

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Gln24-Lys265, with a C-terminal 6-His tag Accession # P16422
N-terminal Sequence Analysis	No results obtained. Gln24 inferred from enzymatic pyroglutamate treatment revealing Glu25
Predicted Molecular Mass	28 kDa

SPECIFICATIONS

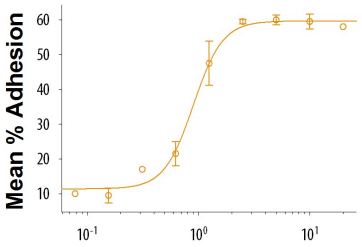
SDS-PAGE	30-42 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of the L Cells mouse fibroblast cell line. When 5 x 10^4 cells/well are added to Recombinant Human EpCAM/TROP-1 and Human Fibronectin (0.5 µg/mL, Catalog # 1918-FN) coated plates, cell adhesion is enhanced in a dose dependent manner. The ED_{50} for this effect is typically 0.4-2.4 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. 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 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.

DATA

Bioactivity



Immobilized Recombinant Human EpCAM/TROP1 (Catalog # 9277-EP) enhances L Cells mouse fibroblasts adhesion in the presence of Human Fibronectin (Catalog # 1918-FN). The ED_{50} for this effect is 0.4-2.4 µg/mL.

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BACKGROUND

Epithelial Cellular Adhesion Molecule (EpCAM), also known as KS1/4, gp40, GA733-2, 17-1A, and TROP-1, is a 40 kDa transmembrane glycoprotein that consists of a 242 amino acid (aa) extracellular domain with two EGF-like repeats, a 23 aa transmembrane segment, and a 26 aa cytoplasmic domain (1). Human and mouse EpCAM share 82% aa sequence identity. During embryonic development, EpCAM is detected in fetal lung, kidney, liver, pancreas, skin, and germ cells. In adults, human EpCAM is expressed on basolateral cell membranes of all simple, pseudo-stratified, and transitional epithelia but not on normal squamous stratified epithelia, mesenchymal tissue, muscular tissue, neuro-endocrine tissue, or lymphoid tissue (2). It is additionally expressed on undifferentiated embryonic stem cells, thymocytes, and dendritic cells (3-5). It is up-regulated on actively proliferating epithelial tissues, during adult liver regeneration, and on many epithelial cell-derived carcinomas (2, 6). EpCAM functions as a homophilic cell adhesion molecule (7). It associates into tetramers and forms complexes in cis with Claudin-7, CD44v6, TSPAN8, CD9, Integrin alpha 3, and Annexin A1 (8-11) that can interfere with cell adhesion (12, 13). Proteolytic cleavage of EpCAM releases multiple fragments from the ECD as well as a cytoplasmic fragment that can regulate gene transcription (14-16).

References:

1. Strnad, J. *et al.* (1989) Cancer Res. **49**:314.
2. Schnell, U. *et al.* (2013) Biochim. Biophys. Acta **1828**:1989.
3. Ng, V.Y. *et al.* (2010) Stem Cells **28**:29.
4. Nelson, A.J. *et al.* (1996) Eur. J. Immunol. **26**:401.
5. Borkowski, T.A. *et al.* (1996) Eur. J. Immunol. **26**:110.
6. de Boer, C.J. *et al.* (1999) J. Pathol. **188**:201.
7. Litvinov, S.V. *et al.* (1994) J. Cell Biol. **125**:437.
8. Balzar, M. *et al.* (2001) Mol. Cell. Biol. **21**:2570.
9. Nubel, T. *et al.* (2009) Mol. Cancer Res. **7**:285.
10. Kuhn, S. *et al.* (2007) Mol. Cancer Res. **5**:553.
11. Schmidt, D.S. *et al.* (2004) Exp. Cell Res. **297**:329.
12. Litvinov, S.V. *et al.* (1997) J. Cell Biol. **139**:1337.
13. Gaiser, M.R. *et al.* (2012) Proc. Natl. Acad. Sci. USA **109**:E889.
14. Schnell, U. *et al.* (2013) Biosci. Rep. **33**:e00030.
15. Schon, M.P. *et al.* (1993) Int. J. Cancer **55**:988.
16. Maetzel, D. *et al.* (2009) Nat. Cell Biol. **11**:162.

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