

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived cynomolgus monkey EpCAM/TROP1 protein		
	Cynomolgus Monkey EpCAM/TROP-1 (Gln24-Lys265) Accession # NP_001035118.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Gln24, blocked, deduced from Lys25 upon deblocking		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	54 kDa		

SPECIFICATIONS

SDS-PAGE	60-66 kDa, under reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of the L Cells mouse fibroblast cell line. The ED ₅₀ for this effect is 0.3-1.8 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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

<p>Bioactivity</p> <p>Mean RFU</p> <p>Recombinant Cynomolgus Monkey EpCAM/TROP-1 (µg/mL)</p> <p>Immobilized Recombinant Cynomolgus Monkey EpCAM/TROP-1 His-tag protein (Catalog # 10406-EP) supports the adhesion of L Cells mouse fibroblast cells. The ED₅₀ for this effect is 0.3-1.8 µg/mL.</p>	<p>SDS-PAGE</p> <p>2 µg/lane of Recombinant Cynomolgus Monkey EpCAM/TROP-1 His-tag (Catalog # 10406-EP) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 60-66 kDa and 120-150 kDa, respectively.</p>
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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. Based on its similarity with human EpCAM, Cynomolgus EpCAM is predicted to consist of a 242 amino acid (aa) extracellular domain with two epidermal growth factor like (EGF-like) repeats within the cysteine rich N-terminal region, a 23 aa transmembrane domain, and a 26 aa cytoplasmic domain. Cynomolgus and human EpCAM share 93% aa sequence identity (1). 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:

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