EpCAM/TROP1 Protein, Rat (HEK293, His)

Cat. No.:	HY-P74172
Synonyms:	Epithelial cell adhesion molecule; Ep-CAM; EGP; KSA; CD326; TROP1
Species:	Rat
Source:	HEK293
Accession:	O55159 (Q24-T266)
Gene ID:	171577
Molecular Weight:	Approximately 30-36 kDa due to the glycosylation.

PROPERTIES

AA Sequence	Q K D C V C N N Y K L T S R C Y E N E N G E C Q C T S Y G T Q N T V I C S K L A S K C L V M K A E M T H S K S G R R M K P E G A I Q N N D G L Y D P E C D E Q G L F K A K Q C N G T A T C W C V N T A G V R R T D K D T E I T C S E R V R T Y W I I I E L K H K E R A Q P Y N F E S L H T A L Q D T F A S R Y M L N P K F I K S I M Y E N N V I T I D L M Q N S S Q K T Q D D V D I A D V A Y Y F E K D V K G E S L F H S S K S M D L R V N G E L L D L D P G Q T L I Y Y V D E K A P E F S M Q G L T
Biological Activity	Measured by the ability of the immobilized protein to support the adhesion of the L929 mouse fibroblast cell line. The ED_{50} for this effect is 1.332 μg/mL in the presence of 0.5 μg/mL Fibronectin, corresponding to a specific activity is 750.751 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The EpCAM/TROP1 protein serves a multifaceted role, potentially acting as a physical homophilic interaction molecule that

facilitates direct contact between intestinal epithelial cells (IECs) and intraepithelial lymphocytes (IELs) at the mucosal epithelium. This interaction suggests a pivotal function in establishing an immunological barrier, serving as the first line of defense against mucosal infections. Beyond its involvement in mucosal immunity, EpCAM/TROP1 plays a significant role in the proliferation and differentiation of embryonic stem cells. Moreover, it exhibits regulatory influence by up-regulating the expression of FABP5, MYC, and cyclins A and E, implicating EpCAM/TROP1 in the modulation of key cellular processes. Its monomeric nature and interaction with phosphorylated CLDN7 underscore the intricacies of its molecular interactions, shedding light on its diverse functions in cellular physiology.

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