abcam

Product datasheet

Recombinant human EpCAM protein ab155637

1 Image

Overview

Product name	Recombinant human EpCAM protein
Protein length	Protein fragment

Description

Nature	Recombinant
Source	HEK 293 cells

Amino Acid Sequence

Accession	P16422
Species	Human
Sequence	QEECVCENYKLAVNCFVNNNRQCQCTSVGAQNTVICSKLAAKCLVMKAEM NGSKLGRRAKPEGALQNNDGLYDPDCDESGLFKAKQCNGTSMCWCVNTAG VRRTDKDTEITCSERVRTYWIIIELKHKAREKPYDSKSLRTALQKEITTR YQLDPKFITSILYENNVITIDLVQNSSQKTQNDVDIADVAYYFEKDVKGE SLFHSKKMDLTVNGEQLDLDPGQTLIYYVDEKAPEFSMQGLK
Molecular weight	29 kDa including tags
Amino acids	24 to 265
Tags	His tag C-Terminus

Specifications

Our Abpromise guarantee covers the use of **ab155637** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Biological activity	Measured by its binding ability in a functional ELISA. Immobilised recombinant human Cathepsin V at 10 µg/ml (100 µl/well) can bind biotinylated EpCAM. The EC_{50} of biotinylated EpCAM is 50-70 ng/ml.
Applications	Functional Studies SDS-PAGE
Endotoxin level	< 1.000 Eu/µg
Purity	>95% by SDS-PAGE .

Form	Lyophilised

Preparation and Storage

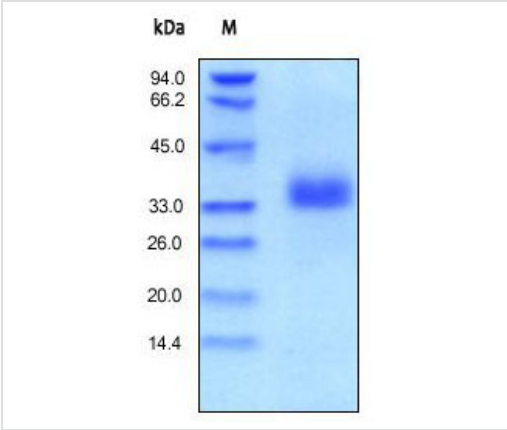
Stability and Storage	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.40 Constituents: 95% PBS, 5% Trehalose This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	It is recommended to reconstitute the lyophilized protein in sterile deionized water to a final concentration of 1000 ug/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Carrier protein (0.1% HSA or BSA) is strongly recommended for further dilution and long term storage.

General Info

Function	May act as a physical homophilic interaction molecule between intestinal epithelial cells (IECs) and intraepithelial lymphocytes (IELs) at the mucosal epithelium for providing immunological barrier as a first line of defense against mucosal infection. Plays a role in embryonic stem cells proliferation and differentiation. Up-regulates the expression of FABP5, MYC and cyclins A and E.
Tissue specificity	Highly and selectively expressed by undifferentiated rather than differentiated embryonic stem cells (ESC). Levels rapidly diminish as soon as ESC's differentiate (at protein levels). Expressed in almost all epithelial cell membranes but not on mesodermal or neural cell membranes. Found on the surface of adenocarcinoma.
Involvement in disease	Defects in EPCAM are the cause of diarrhea type 5 (DIAR5) [MIM:613217]. It is an intractable diarrhea of infancy characterized by villous atrophy and absence of inflammation, with intestinal epithelial cell dysplasia manifesting as focal epithelial tufts in the duodenum and jejunum. Defects in EPCAM are a cause of hereditary non-polyposis colorectal cancer type 8 (HNPCC8) [MIM:613244]. HNPCC is a disease associated with marked increase in cancer susceptibility. It is characterized by a familial predisposition to early-onset colorectal carcinoma (CRC) and extra-colonic tumors of the gastrointestinal, urological and female reproductive tracts. HNPCC is reported to be the most common form of inherited colorectal cancer in the Western world. Clinically, HNPCC is often divided into two subgroups. Type I is characterized by hereditary predisposition to colorectal cancer, a young age of onset, and carcinoma observed in the proximal colon. Type II is characterized by increased risk for cancers in certain tissues such as the uterus, ovary, breast, stomach, small intestine, skin, and larynx in addition to the colon. Diagnosis of classical HNPCC is based on the Amsterdam criteria: 3 or more relatives affected by colorectal cancer, one a first degree relative of the other two; 2 or more generation affected; 1 or more colorectal cancers presenting before 50 years of age; exclusion of hereditary polyposis syndromes. The term 'suspected HNPCC' or 'incomplete HNPCC' can be used to describe families who do not or only partially fulfill the Amsterdam criteria, but in whom a genetic basis for colon cancer is strongly suspected. Note=HNPCC8 results from heterozygous deletion of 3-prime exons of EPCAM and intergenic regions directly upstream of MSH2, resulting in transcriptional read-through and epigenetic silencing of MSH2 in tissues expressing EPCAM.
Sequence similarities	Belongs to the EPCAM family. Contains 1 thyroglobulin type-1 domain.

Post-translational modifications	Hyperglycosylated in carcinoma tissue as compared with autologous normal epithelia. Glycosylation at Asn-198 is crucial for protein stability.
Cellular localization	Lateral cell membrane. Cell junction > tight junction. Co-localizes with CLDN7 at the lateral cell membrane and tight junction.

Images



SDS-PAGE - EpCAM protein (Active) (ab155637)

SDS-PAGE analysis of reduced ab155637 stained overnight with Coomassie Blue.

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