abcam

Product datasheet

Anti-EpCAM antibody [MOC-31] ab187270

2 References 1 Image

Overview

Product name	Anti-EpCAM antibody [MOC-31]
Description	Mouse monoclonal [MOC-31] to EpCAM
Tested applications	**Suitable for:** WB, IP, Flow Cyt, ICC/IF, IHC-Fr, IHC-P
Species reactivity	**Reacts with:** Human **Does not react with:** Rat
Immunogen	Tissue, cells or virus corresponding to Human EpCAM. Neuraminidase treated GLS-1 human small cell lung carcinoma cells Database link: P16422
Positive control	HT29 cells, Human breast tumor and Human colon cancer tissue.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Purification notes	Bioreactor Concentrate
Clonality	Monoclonal
Clone number	MOC-31
Isotype	IgG1
Light chain type	kappa

Applications

Our Abpromise guarantee covers the use of **ab187270** in the following tested applications.

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

Application	Abreviews	Notes
WB		1/100 - 1/200. Detects a band of approximately 40-43 kDa (predicted molecular weight: 35 kDa).

Application	Abreviews	Notes
IP		Use at an assay dependent concentration. 10-20 µl/mg of protein lysate
Flow Cyt		Use 5-10µl for 10^6 cells. ab170190-Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF		1/50 - 1/100.
IHC-Fr		1/100 - 1/200.
IHC-P		1/100 - 1/200. Perform enzymatic antigen retrieval before commencing with IHC staining protocol. Staining of formalin/paraffin tissues REQUIRES digestion of tissue sections with pepsin at 1mg/ml Tris-HCl, pH 2.0 for 15 min at RT or 10 min at 37°C

Target

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

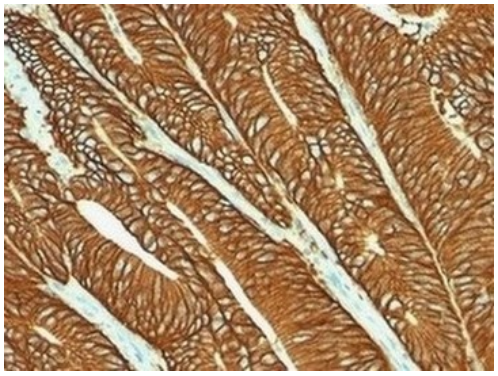
Defects in EPCAM are the cause of diarrhea type 5 (DIAR5) [MIM:613217]. It is an intractable diarrhea of infancy characterized by villous atrophy and absence of inflammation, with intestinal epithelial cell dysplasia manifesting as focal epithelial tufts in the duodenum and jejunum. Defects in EPCAM 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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM [MOC-31] antibody (ab187270)

Immunohistochemical analysis of formalin fixed, paraffin embedded Human colon cancer tissue labeling EpCAM with ab187270 at 1/100.

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