

## Monoclonal Antibody to CD326 / EPCAM / TACSTD1 - FITC

<b>Alternate names:</b>	Adenocarcinoma-associated antigen, EGP314, Ep-CAM, Epithelial cell adhesion molecule, Epithelial glycoprotein 314, GA733-2, KS 1/4 antigen, KSA, M1S2, M4S1, MIC18, Major gastrointestinal tumor-associated protein GA733-2, TROP1, Trop-1, Tumor-associated calcium signal transducer 1
<b>Catalog No.:</b>	BM2274F
<b>Quantity:</b>	0.25 ml
<b>Concentration:</b>	3.0 mg/ml
<b>Background:</b>	Epithelial Cell Adhesion Molecule (EpCAM) is a 40 kDa cell surface antigen. This antigen has been identified independently by a number of groups, and has been known by a variety of names. Several monoclonal antibodies have been raised against EpCAM, many of which have been described as tumour specific molecules on carcinomas. EpCAM is a Type 1 transmembrane glycoprotein. It is expressed on the basolateral membrane of cells by the majority of epithelial tissues, with the exception of adult squamous epithelium and some specific epithelial cell types including hepatocytes and gastric epithelial cells. EpCAM expression has been reported to be a possible marker of early malignancy, with expression being increased in tumour cells, and de novo expression being seen in dysplastic squamous epithelium.
<b>Uniprot ID:</b>	<a href="#">P16422</a>
<b>NCBI:</b>	<a href="#">NP_002345.2</a>
<b>GeneID:</b>	<a href="#">4072</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Clone:</b>	HEA125
<b>Immunogen:</b>	HT-29 colon carcinoma cell line
<b>Format:</b>	<b>State:</b> Liquid purified Ig fraction <b>Purification:</b> Affinity Chromatography on Protein A <b>Preservatives:</b> 0.09% Sodium Azide <b>Label:</b> FITC – Fluorescein Isothiocyanate Isomer 1
<b>Applications:</b>	<b>Immunofluorescence Microscopy.</b> <b>Cell Sorting, Cytological Material.</b> <b>Immunohistochemistry on Frozen Sections and Paraffin-Embedded Sections.</b> With Paraffin embedded sections, protease pretreatment is required prior to antibody application. <i>Working Dilution:</i> Dilute at least 1/10 with PBS, pH 7.4 for Immunohistochemical application. <i>Incubation Time:</i> 1 h at RT.

**For research and in vitro use only. Not for diagnostic or therapeutic work.**

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Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:**

The Ep-CAM (HEA125) antibody recognizes the epithelial cell adhesion molecule Ep-CAM (also described as 17-1A antigen or EPG34). This antigen is widely expressed on cells of epithelial origin and tumors derived therefrom. HEA125 represents an excellent marker to discriminate epithelial from mesothelial structures. The antigen has been detected in all carcinoma types tested (18 different origins).

A subset of squamous cell carcinoma is negative.

**Reactivities on Cultured Cell Lines:** All carcinoma cell lines tested so far; particularly strong reaction with colon carcinoma cell lines (HT-29, WiDr, SW1116).

**Polypeptide reacting:** Mr 40,000 human epithelium-specific cell surface glycoprotein (Ep-CAM).

**Species Reactivity:** **Tested:** Human.

**Storage:**

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

**General References:**

1. Edwards, P.A.W. (1985) Heterogeneous expression of cell-surface antigens in normal epithelia and their tumours, revealed by monoclonal antibodies. *Br. J. Cancer.* 51: 149-160 (1985).
2. Moldenhauer, G. et al. (1987) Epithelium-specific surface glycoprotein of Mr 34,000 is a widely distributed human carcinoma marker. *Br. J. Cancer.* 56: 714-721.
3. Momburg, F. et al. (1987) Immunohistochemical study of the expression of a Mr 34,000 human epithelium-specific surface glycoprotein in normal and malignant tissues. *Cancer Res.* 47: 2883-2891 (1987).
4. Simon, B. et al. (1990) Epithelial glycoprotein is a member of a family of epithelial cell surface antigens homologous to nidogen, a matrix adhesion protein. *Proc. Natl. Acad. Sci. USA.* 87: 2755 ff.
5. Kemmner, W. et al. (1992) Separation of tumour cells from a suspension of dissociated human colorectal carcinoma tissue by means of monoclonal antibody-coated magnetic beads. *J. Immunol. Methods* 147: 197-200.
6. Winter, M. J. et al. (2003) The epithelial cell adhesion molecule (Ep-CAM) as a morphoregulatory molecule is a tool in surgical pathology. *Am. J. Pathol.* 163 : 2139-2148.
7. Joplin R, Strain AJ, Neuberger JM: Biliary epithelial cells from the liver of patients with primary biliary cirrhosis: isolation, characterization, and short-term culture. *J Pathol* 162, 255-260 (1990).
8. Metzgeroth G, Mantz C, Kuhn C, Schultheis B, Hehlmann R, Hastka J: Reliable identification of small cell lung cancer in cytological specimens by immunocytology. *Onkologie* 30, 311-315 (2007).
9. Kommos F, Oliva E, Young RH, Bittinger F, Kirkpatrick CJ, Schmidt D: Expression of Müllerian inhibiting substance, CD99 and HEA125 in ovarian tumors. *Geburtsh Frauenheik* 61, 274-279 (2001).
10. Racila E, Euhus D, Weiss AJ, Rao C, McConnel J, Terstappen LMWW, Uhr JW: Detection and characterization of carcinoma cells in the blood. *Proc Natl Acad Sci USA* 92, 4589-4594 (1998).
11. Balzar M, Winter MJ, deBoer CJ, Litvinov SV: The biology of the 17-1A antigen (Ep-CAM). *J Mol Med* 77, 699-712 (1999).

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