Ep-CAM/Epithelial Specific Antigen clone Ber-EP4

Instructions for Use

Specification:
Ep-CAM/Epithelial Specific Antigen consists of two glycoproteins, 34 and 39 kDa, sometimes designated Epithelial antigen, epithelial specific antigen, and epithelial glycoprotein. In paraffin sections, the protein is detected with mAbs like Ber-EP4 and MOC-31. The glycoproteins are located on the cell membrane surface and in the cytoplasm of virtually all epithelial cells except for most squamous epithelia, hepatocytes, renal proximal tubular cells, gastric parietal cells and myoepithelial cells. However, focal positivity may be seen in the basal layer of squamous cell epithelium of endoderm (e.g., palatine tonsils) and mesoderm (e.g., uterine cervix). In liver lesions like hepatitis and cirrhosis, the hepatocytes frequently become Ep-CAM positive. Normal mesothelial cells are Ep-CAM negative but may express focal reaction when undergoing reactive changes. Mesenchymal cells and cells from the neural crest are negative, except for olfactory neurons.

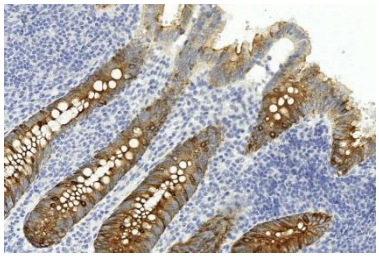
Ep-CAM is found in most adenocarcinomas of most sites (50-100% in various studies; as well as neuroendocrine tumours, including small cell carcinoma. Renal cell carcinoma and hepatocellular carcinoma stain in about 30% of the cases. Squamous cell carcinoma of endoderm and mesoderm is usually Ber-EP4 positive, while that of ectoderm is negative. Basal cell and basosquamous carcinoma are Ber-EP4 positive in almost all cases. Choroid plexus papilloma and carcinoma are usually negative.

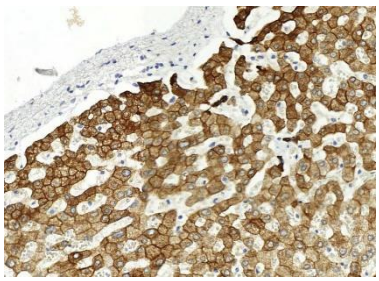
Malignant mesothelioma (epithelioid and biphasic) is Ep-CAM positive in 4-26% of the cases. The staining is usually focal but may occasionally be widespread. Synovial sarcoma (epithelioid and biphasic) and desmoplastic small round cell tumour stain for Ep-CAM in most cases.
Seminoma, embryonal carcinoma, yolk sac tumour and choriocarcinoma reveal Ber-EP4 positivity in a minor proportion of cases. Among neural tumours, Ep-CAM positivity is seen only in olfactory neuroblastoma.

Ep-CAM can be of great help in the differential diagnosis of malignant involvement in the peritoneal and pleural cavities. The lack of reactivity in the majority of malignant mesothelioma can in an appropriate panel be utilized in the discrimination between this tumour and adenocarcinoma. As for a series of anti-epithelial antibodies, Ber-EP4 or MOC-31 may be used in the demonstration of epithelial cell differentiation in cases where anti-cytokeratin's do not produce a clear-cut positivity or in cases where a false positivity for cytokeratin cannot be excluded, such as in sub mesothelial cells.

Availability:

Catalog No.	Contents	Volume
ILM2483-C01	Ep-CAM/ESA	0,1 ml concentrate
ILM2483-C05	Ep-CAM/ESA	0,5 ml concentrate
ILM2483-C1	Ep-CAM/ESA	1,0 ml concentrate





Intended use: For Research Use Only

Reactivity: Human

Clone: Ber-EP4

Species of origin: Mouse

Isotype: IgG1/K

Control Tissue: Columnar epithelium, adenocarcinoma

Staining: Cytoplasmic

Immunogen: Breast carcinoma cell line MCF-7

Presentation: Bioreactor Concentrate with 0.05% Azide

Application and suggested dilutions:
Pre-treatment: Heat induced epitope retrieval in 10 mM citrate buffer, pH6.0, or in 50 mM Tris buffer pH9.5, for 20 minutes is required for IHC staining on formalin-fixed, paraffin embedded tissue sections.

- Immunohistochemical staining of cryostat tissue sections (dilution up to 1:100 – 1:200)
- Immunohistochemical staining of formalin-fixed, paraffin embedded tissue section (dilution up to 1:100 - 1:200)

The optimal dilution for a specific application should be determined by the investigator.

Note: Dilution of the antibody in 10% normal goat serum followed by a goat anti-mouse secondary antibody-based detection is recommended.

Storage & Stability: Store at 2-8 °C. Do not use after expiration date printed on the vial.

References:

1) Latza et al, J Clin Pathol. 990;43:213-19.
2) Ma et al, Am J Clin Pathol. 1993;99(5):551-7.
3) Carella et al, Am J Surg Pathol 2001; 25(1):43-50.
4) Ordóñez NG., Adv Anat Pathol. 2006 Jan;13(1):16-25. Review.
5) Ordóñez NG., Mod Pathol. 2006 Mar;19(3):417-28.
6) Ordonez NG., Am J Clin Pathol 1998;109(1):85-89.