

I Meet the Marker - Ber-EP4

Meet the Marker - Ber-EP4

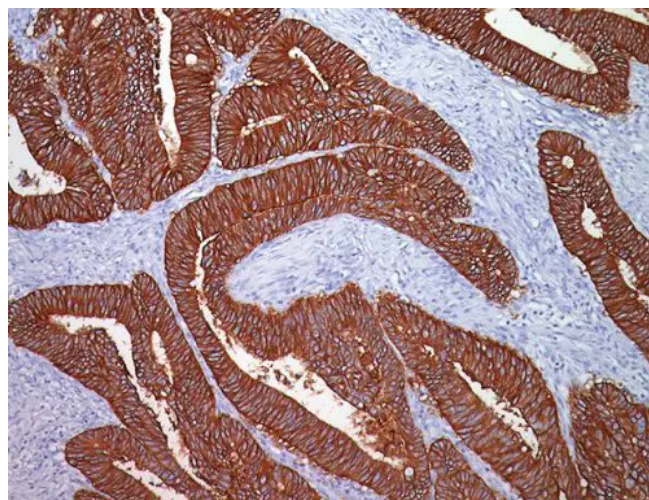
Ber-EP4 is an immunohistochemical (IHC) marker used to detect the presence of epithelial cells in tissue samples.¹ It is a monoclonal antibody that recognizes a glycoprotein called epithelial cell adhesion molecule (EpCAM), which is expressed on the surface of most epithelial cells, the cells that line the surfaces of the body.^{2,4} Since its discovery, it has been widely used in the diagnosis of a variety of epithelial tumors.

As an epithelial marker, Ber-EP4 is used in the diagnosis of various epithelial tumors, including breast, ovarian, lung, prostate, and colorectal cancers.⁵ In skin samples, it aids in distinguishing basal cell carcinoma from squamous cell carcinoma, as well as other cutaneous pathologies such as basosquamous cell carcinoma, sebaceoma, and more.^{2,4}

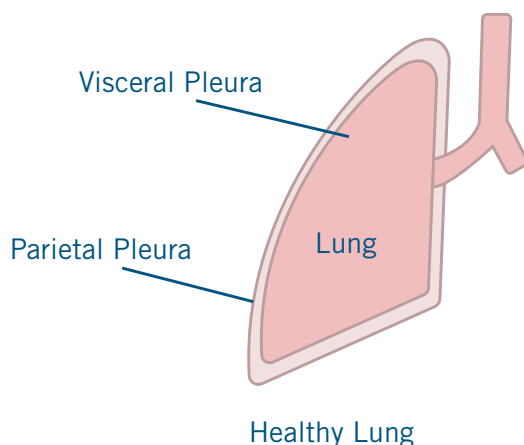
It is also useful in the differentiation of pulmonary adenocarcinoma from mesothelioma, a type of cancer that arises from the mesothelial cells that line the body cavities.² Due to their similar presentation, epithelial mesotheliomas can be difficult to differentiate from adenocarcinomas that have infiltrated the pleura in the lungs.³ However, while EpCAM is expressed in most epithelial cells in the body, it is not expressed in mesothelium, and so mesotheliomas should be negative for Ber-EP4.²

Ber-EP4 is often used in conjunction with other IHC markers to aid in the diagnosis of difficult cases.

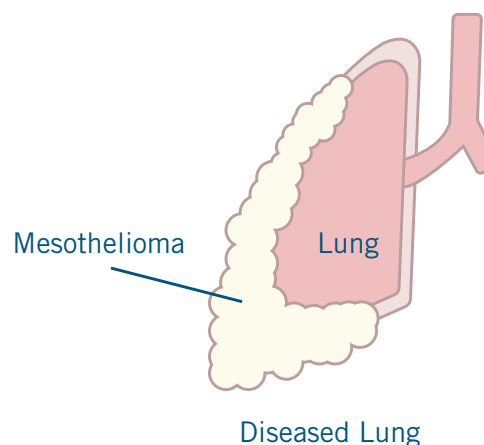
Ber-EP4 Stains and Illustrations



Breast Cancer Stained with Ber-EP4 Antibody



Healthy Lung



Diseased Lung

To learn more about Biocare Medical's product offerings for Ber-EP4, please visit our website at www.biocare.net or call our Technical Support line for more information at 1-800-799-9499, Option 3.

1. Bailey, M. E., Brown, R. W., Mody, D. R., Cagle, P., & Ramzy, I. (1996). Ber-EP4 for differentiating adenocarcinoma from reactive and neoplastic mesothelial cells in serous effusions. Comparison with carcinoembryonic antigen, B72.3 and Leu-M1. *Acta cytologica*, 40(6), 1212–1216. <https://doi.org/10.1159/000333982>

2. Mayo Foundation for Medical Education and Research. (n.d.). BerEP - Overview: BER-EP4 (epithelial cell adhesion molecule/EPCAM) Immunostain, technical component only. BEREP - Overview: Ber-EP4 (Epithelial Cell Adhesion Molecule/EPCAM) Immunostain, Technical Component Only. Retrieved February 22, 2023, from <https://www.mayocliniclabs.com/test-catalog/overview/70364#Clinical-and-Interpretive>

3. Ordóñez N. G. (1998). Value of the Ber-EP4 antibody in differentiating epithelial pleural mesothelioma from adenocarcinoma. The M.D. Anderson experience and a critical review of the literature. *American journal of clinical pathology*, 109(1), 85–89. <https://doi.org/10.1093/ajcp/109.1.85>

4. Sunjaya, A. P., Sunjaya, A. F., & Tan, S. T. (2017). The Use of BEREP4 Immunohistochemistry Staining for Detection of Basal Cell Carcinoma. *Journal of skin cancer*, 2017, 2692604. <https://doi.org/10.1155/2017/2692604>

5. Went P, Vasei M, Bubendorf L, et al. Frequent high-level expression of the immunotherapeutic target Ep-CAM in colon, stomach, prostate and lung cancers. *Br J Cancer*. 2006;94(1):128-135.