

## Product Information

### Anti-EpCAM antibody, Mouse monoclonal

clone Ber-EP4, hybridoma cell culture supernatant

Product Number **SAB4200690**

#### Product Description

Anti-EpCAM antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the hybridoma Ber-EP4 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with human breast carcinoma cell line MCF-7.<sup>1</sup> The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is culture supernatant of hybridoma cells grown in a bioreactor.

Anti-EpCAM antibody, Mouse monoclonal specifically recognizes human EpCAM expressed at the surface of epithelial cells and is not reactive with normal or neoplastic non-epithelial cells.<sup>1</sup> The antibody may be used in various immunochemical techniques including Immunohistochemistry, Immunofluorescence, and Immunoprecipitation.<sup>1,2</sup>

EpCAM, also known as Epithelial cell adhesion molecule, epithelial specific antigen, or epithelial glycoprotein, is a highly conserved type I single-span transmembrane glycoprotein, which regulates cell-cell contact adhesion strength and tissue plasticity as well as playing an important role in epithelial cells proliferation and differentiation.<sup>3</sup> EpCAM is present on most epithelia tissues of the adult body and in undifferentiated rather than differentiated embryonic stem cells (ESCs).<sup>4-5</sup>

The protein was initially identified as a tumor marker and is highly expressed in most epithelial malignant tissues cancers.<sup>3,6</sup> Mutations in EpCAM are associated with several intestinal abnormalities such as Lynch syndrome and congenital tufting enteropathy.<sup>6-7</sup> Anti-EpCAM antibody is considered as a useful tool for research of epithelial cells signaling pathways, cancer diagnostics, and prediction of disease progression. In addition, Anti-EpCAM has been proved valuable for the distinction of undifferentiated primary or metastatic tumors from non-epithelial tumors, bile duct cells from hepatocytes in certain liver diseases, and between epithelial and normal reactive or neoplastic mesothelial cells from carcinoma cells.<sup>1</sup>

#### Reagent

The product is supplied as a culture supernatant solution containing 15 mM sodium azide as a preservative. The product contains bovine serum albumin and a human-derived protein.

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

**Immunofluorescence:** a working dilution of 1:500-1:1,000 is recommended using human breast adenocarcinoma MCF-7 cell line.

**Immunohistochemistry:** a working dilution of 1:250-1:500 is recommended using heat-retrieved formalin-fixed, paraffin-embedded human colon carcinoma sections.

**Note:** In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

#### References

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2. Pilarsky, R. et al., *Genes Chromosomes Cancer*, **53**, 177-82 (2014).
3. Schnell, U. et al., *Biochim. Biophys. Acta*, **1828**, 1989-2001 (2013).
4. Moldenhauer, G. et al., *Br. J. Cancer*, **56**, 714-721 (1987).

5. Herlyn, Z. et al., *PNAS*, **76**, 1438-42 (1979).
6. Sivagnanam M., et al., *Gastroenterology*, **135**, 429–37 (2008).

7. Kuiper, R.P. et al., *Hum. Mutat.*, **32**, 407–14 (2011).

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