



Product Information

Monoclonal Anti-Breast Cancer Resistance Protein (BCRP, ABCG2)

Clone BXP-21
Mouse Culture Supernatant

Product Number **B 7059**

Product Description

Monoclonal Anti-Breast Cancer Resistance Protein (BCRP, ABCG2) (mouse IgG2a isotype) is derived from the BXP-21 hybridoma produced by the fusion SP2/O mouse myeloma cells and lymph nodes cells from a BALB/c mouse immunized with a fusion protein containing human BCRP (amino acids 271-396) and maltose-binding protein. The antibody is concentrated from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Breast Cancer Resistance Protein (BCRP, ABCG2) recognizes an internal epitope of human BCRP (70 kDa), a transmembrane half-transporter. The antibody does not cross-react with the human MDR1, MRP1, and MRP2 gene products. The antibody may be used in immunocytochemistry, immunoblotting, and immunohistochemistry (frozen and formalin-fixed, paraffin-embedded sections).

Tumor cells may display a multidrug resistant phenotype by overexpression of ATP-binding cassette transporters such as multidrug resistance (MDR1) p-glycoprotein, multidrug resistance protein 1 (MRP1), and breast cancer resistance protein (BCRP). Tumor cells can be intrinsically resistant to drugs or they can acquire resistance to structurally and functionally unrelated drugs on drug exposure. This phenomenon is known as multidrug resistance (MDR). In human tumor cells, several transporter proteins can be involved in MDR. These proteins, MDR1 P-gp (ABCB1), MRP1 (ABCC1), MRP2 (ABCC2), MRP3 (ABCC3), and BCRP (ABCG2), belong to the ABC transporter family. They act as efflux pumps, which result in decreased intracellular concentrations of cytotoxic drugs.

BCRP is a recently discovered half-transporter that probably acts as a homo- or heterodimer in transporting cytotoxic agents. The transporter molecule is capable of transporting several anticancer drugs but has thus far been found mainly in MX-resistant cell lines.

Reagent

Monoclonal Anti-Breast Cancer Resistance Protein is supplied as a solution in serum-free culture medium, containing 0.7% bovine serum albumin and 0.1% sodium azide.

Antibody concentration: Approx. 250 µg/ml

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

A working dilution of 1:20 to 1:50 is determined using immunocytochemistry on acetone-fixed, frozen cytospin preparations.

A working dilution of 1:20 is determined using immunohistochemistry on acetone-fixed, frozen sections using rabbit anti-mouse IgG and a APAAP complex.

The antibody can be used on formalin-fixed, paraffin-embedded human tissues and tumors after pretreatment with 10 mM citric acid, pH 6.0, for 20 minutes.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilution by titration.

References

1. Doyle, L.A., et al., A multidrug resistance transporter from human MCF-7 breast cancer cells. Proc. Natl. Acad. Sci. USA, **95**, 15665-15670 (1998).
2. Scheffer, G.L., et al., Breast Cancer Resistance Protein is localized at the plasma membrane in mitoxantrone and topotecan resistant cell lines. Cancer Res., **60**, 2589-2593 (2000).
3. Maliepaard, M., et al., Subcellular localization and distribution of the breast cancer resistance protein transporter in normal human tissues. Cancer Res., **61**, 3458-3464 (2001).

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