

## Product Information

### Monoclonal Anti-Breast Cancer Resistance Protein, clone BXP-34

produced in mouse, tissue culture supernatant

Catalog Number **B7684**

**Synonyms:** Anti-ABCG2; Anti-BCRP

#### Product Description

Monoclonal Anti-Breast Cancer Resistance Protein (mouse IgG1 isotype) is derived from the BXP-34 hybridoma produced by the fusion SP2/O mouse myeloma cells and lymph nodes cells from a BALB/c mouse immunized with mitoxantrone resistant, *BCRP* overexpressing cell line MCF7 MR. 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, MRP2, or MRP5 gene products. The antibody may be used in immunocytochemistry and immunohistochemistry (frozen sections). It is not suitable for immunoblotting. The antibody is also not suitable for formalin-fixed, paraffin-embedded human tissues and tumors.

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

Supplied as a solution in serum-free culture medium, containing 1% bovine serum albumin and 0.1% sodium azide.

Antibody concentration: ~250 µg/ml

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material 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 prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in frost-free freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

**Immunocytochemistry:** a working dilution of 1:20-1:50 is determined using acetone-fixed cytospin preparations.

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

**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).

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