

Product Information

Anti-BACH1

produced in rabbit, affinity isolated antibody

Product Number **B1310**

Product Description

Anti-BACH1 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 1233-1249 of human BACH1 with N-terminal added cysteine, conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-BACH1 recognizes human BACH1. Applications include immunoblotting (~150 kDa), immunoprecipitation, and immunofluorescence. Additional weak bands may be detected in various extract preparations. Detection of BACH1 by immunoblotting is specifically inhibited with the immunizing peptide.

BACH1 (BRCA1-associated C-terminal helicase1) is a member of the RecQ DEAH helicase family. BACH1 is also designated BRIP1 (BRCA1-interacting protein1) and homolog of DOG1.

BACH1 interacts directly with the C-terminal BCRT-repeats in Breast cancer type1 protein (BRCA1), a tumor suppressor nuclear phosphoprotein that has been implicated in the repair of double-stranded DNA breaks.^{1,2} *In vivo* interaction between BRCA1 and BACH1 appears to be dependent on phosphorylation of Ser⁹⁹⁰ in the latter during the G2/M phase of the cell cycle.^{3,4} BACH1 mutations may interfere with normal double-strand break repair in a manner that is dependent on its binding to the BRCA1 protein. Such mutations were found in patients with early-onset breast cancer. Nevertheless BACH1 importance as a major breast cancer susceptibility gene has not been established in a population study.^{5,6} BACH1 is expressed in numerous tissues. The protein includes a nuclear localization signal in its helical domain. It displays a punctate nuclear staining pattern similar to that observed for BRCA1.¹

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: 1.0-1.2 mg/ml

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, or storage in frost-free freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify solution by centrifugation. Discard working dilutions if not used within 12 hours.

Product Profile

- **Immunoblotting:** a working antibody concentration of 0.5-1.0 µg/ml is recommended using whole extracts of MCF-7 human breast carcinoma cells.
- **Immunoprecipitation:** 5-10 µg of the antibody will immunoprecipitate BACH1 from 0.5 mg of RIPA extract of human HeLa cells.
- **Indirect immunofluorescence:** a working antibody concentration of 10-20 µg/ml is recommended using human MCF-7 cells.

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

References

1. Cantor, S.B., et al., *Cell*, **105**, 149-160 (2001).
2. Menichini, P., and Linial, M., *Mut. Res.*, **487**, 67-71 (2001).
3. Yu, X., et al., *Science*, **302**, 639-642 (2003).
4. Rodriguez, M., et al., *J. Biol. Chem.*, In press (2004).
5. Karppinen, S.M., et al., *Eur. J. Cancer*, **39**, 366-371 (2003).
6. Luo, L., et al., *Int. J. Cancer*, **98**, 638-639 (2002).

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