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ProductInformation

Anti-BACH1
Developed in Rabbit
Affinity Isolated Antibody

Product Number **B 1310**

Product Description

Anti-BACH1 is developed 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, rat, and mouse 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 Ser^{990} 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

Anti-BACH1 is 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

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 extended storage, freeze in working aliquots. 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

By immunoblotting, a working antibody concentration between 0.1-0.2 µg/ml is recommended using a whole extract of human MCF-7 cells.

By immunoblotting, a working antibody concentration between 0.5-1.0 µg/ml is recommended using whole extracts of mouse NIH-3T3 and rat PC12 cells.

5-10 µg of the antibody immunoprecipitate BACH1 from 0.5 mg of RIPA extract of human HeLa cells.

By indirect immunofluorescence, a working antibody concentration between 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).
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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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