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ProductInformation

Anti-RAD17 (N-terminal)
produced in rabbit, IgG fraction of antiserum

Catalog Number **R8654**

Synonyms: Anti-hRad17; Anti-*S.cerevisiae* homolog of RAD24

Product Description

Anti-RAD17 (N-terminal) is developed in rabbit using a synthetic peptide corresponding to amino acids 2-15 of human RAD17 (isoform 1), conjugated to KLH via a C-terminal added cysteine residue, as immunogen. The immunizing peptide differs from that of isoform 2 by two amino acids. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-RAD17 (N-terminal) specifically recognizes RAD17 by immunoblotting, 75 kDa, and immunoprecipitation. Staining of the RAD17 band in immunoblotting is specifically inhibited by the immunizing peptide.

DNA damage checkpoints are biochemical pathways that delay or arrest cell cycle progression in response to DNA damage.[1, 2] Key checkpoint regulators are conserved throughout eukaryotes. For instance, cloning of the human ATM gene revealed significant homology with its yeast counterparts.[3, 4] The sensors ATM and ATR, which are central players in the checkpoint signaling pathway, are activated by IR or UV radiation, respectively. ATM is activated in response to double-strand breaks, whereas ATR is activated in response to stalled replication forks and to damages that cause distortions and single strands.[1, 5] RAD1, RAD9, HUS1, and RAD17 are sensor proteins as well.[6] RAD9, RAD1, and HUS1 form a stable radioresponsive checkpoint complex, commonly known as 9-1-1, which participates in cellular responses to DNA damage.[5-8] 9-1-1 might be recruited to sites of DNA damage or replication block by a RAD17/RF-C (Replication factor C) complex, where it attracts specialized DNA polymerases and other DNA repair effectors.[9] Treatment of human cells with genotoxic agents induced ATM/ATR dependent phosphorylation of RAD17 at Ser^{635} and Ser^{645}, suggesting that phosphorylation of RAD17 is a critical event during checkpoint signaling in DNA-damaged cells.[10] Eight alternative spliced transcript variants of the gene, which encode four distinct proteins, have been reported.[11] RAD17 has been reported in colon, breast, and non-small cell lung carcinoma.[12-14]

Reagent

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

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 hazardous 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 the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:500-1:1,000 is recommended using HeLa cell lysates.

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

References

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NV,KAA,PHC 06/06-1