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ProductInformation

Anti-WRN (C-terminal)
produced in rabbit, IgG fraction of antiserum

Catalog Number **W1642**

Product Description

Anti-WRN (C-terminal) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 1416-1432 of human WRN (GeneID: 7486), conjugated to KLH via an N-terminal added cysteine residue. 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-WRN (C-terminal) specifically recognizes human WRN by immunoblotting, ~200 kDa. Staining of the WRN band is specifically inhibited by the immunizing peptide.

Werner syndrome (WS) is a rare genetic premature aging disorder characterized by genomic instability with an increasing incidence of tumor formation.[1, 2] The gene defective in WS, *WRN,* encodes a helicase of the RecQ family.[3, 4] Five human RecQ helicases are known to date. Members of the RecQ family of helicases are thought to be essential caretakers of the genome. Consequentely, defects in RecQ2 are linked to the WS syndrome, whereas RecQ3 (Blm) and RecQ4 are associated with the Bloom and Rothmund-Thomson syndromes, respectively.[5] An interesting feature of the Werner helicase, in comparison with other members of the RecQ family, is the presence of an exonuclease domain in the amino terminal portion of the molecule.[4] WRN has been suggested to function in DNA replication, repair, recombination and telomere maintenance. The helicase is capable of unwinding various DNA structures associated with progressing replication forks, as well as promoting formation of intermediates in DNA recombination. Nevertheless, the molecular pathways in which WRN is involved remain elusive.[5, 6] Interactions of WRN with other proteins, which result in functional consequences on either WRN or its interacting protein have been reported. WRN-interacting proteins include Blm, FEN-1, p53, Blm, Rad52, BRCA1, and MRN complex Nbs1/Rad50/Mre11). BRCA1 and WRN act in a coordinated manner to facilitate processing of DNA ICLs (inter strand cross-linkings) and the consequent DNA repair.[7] In addition, the checkpoint complex MRN recruits WRN in order to deal with DSB (double-strand breaks) and ICLs.[8] It has been demonstrated that a 144-residue fragment of WRN can be a multifunctional DNA and protein binding domain (DPBP), that regulates the enzymatic activity of WRN and directs cellular localization through protein-protein interactions.[9]

Reagent

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

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 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 Jurkat 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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