

WRN Antibody (Center T802) Blocking peptide
Synthetic peptide
Catalog # BP12078c**Specification**

WRN Antibody (Center T802) Blocking peptide - Product InformationPrimary Accession [Q14191](#)**WRN Antibody (Center T802) Blocking peptide - Additional Information****Gene ID** 7486**Other Names**

Werner syndrome ATP-dependent helicase, DNA helicase, RecQ-like type 3, RecQ3, Exonuclease WRN, 31--, RecQ protein-like 2, WRN, RECQ3, RECQL2

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

WRN Antibody (Center T802) Blocking peptide - Protein Information**Name** WRN**Synonyms** RECQ3, RECQL2**Function**

Multifunctional enzyme that has magnesium and ATP-dependent 3'-5' DNA-helicase activity on partially duplex substrates (PubMed: [9611231](http://www.uniprot.org/citations/9611231)), PubMed: [9224595](http://www.uniprot.org/citations/9224595), PubMed: [9288107](http://www.uniprot.org/citations/9288107)). Also has 3'->5' exonuclease activity towards double-stranded DNA with a 5'-overhang (PubMed: [11863428](http://www.uniprot.org/citations/11863428)). Has no nuclease activity towards single-stranded DNA or blunt-ended double-stranded DNA (PubMed: [11863428](http://www.uniprot.org/citations/11863428)). Helicase activity is most efficient with (d)ATP, but (d)CTP will substitute with reduced efficiency; strand displacement is enhanced by single-strand binding-protein (heterotrimeric replication protein A complex, RPA1, RPA2, RPA3) (PubMed: [9611231](http://www.uniprot.org/citations/9611231)). Binds preferentially to DNA substrates containing alternate secondary structures, such as replication forks and Holliday junctions. May play an important role in the dissociation of joint DNA molecules that can arise as products of homologous recombination, at stalled replication forks or during DNA

repair. Alleviates stalling of DNA polymerases at the site of DNA lesions. Important for genomic integrity. Plays a role in the formation of DNA replication focal centers; stably associates with foci elements generating binding sites for RP-A (By similarity). Plays a role in double-strand break repair after gamma-irradiation (PubMed:9288107, PubMed:9224595, PubMed:9611231). Depletion leads to chromosomal breaks and genome instability (PubMed:33199508).

Cellular Location

Nucleus, nucleolus. Nucleus, nucleoplasm. Chromosome. Note=Gamma-irradiation leads to its translocation from nucleoli to nucleoplasm and PML regulates the irradiation-induced WRN relocation (PubMed:21639834). Localizes to DNA damage sites (PubMed:27063109).

WRN Antibody (Center T802) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

WRN Antibody (Center T802) Blocking peptide - Images

WRN Antibody (Center T802) Blocking peptide - Background

This gene encodes a member of the RecQ subfamily and theDEAH (Asp-Glu-Ala-His) subfamily of DNA and RNA helicases. DNA helicases are involved in many aspects of DNA metabolism, includingtranscription, replication, recombination, and repair. This proteincontains a nuclear localization signal in the C-terminus and showsa predominant nucleolar localization. It possesses an intrinsic 3'to 5' DNA helicase activity, and is also a 3' to 5' exonuclease.Based on interactions between this protein and Ku70/80 heterodimerin DNA end processing, this protein may be involved in the repairof double strand DNA breaks. Defects in this gene are the cause ofWerner syndrome, an autosomal recessive disorder characterized bypremature aging.

WRN Antibody (Center T802) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Perry, J.J., et al. J. Biol. Chem. 285(33):25699-25707(2010)Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010)Kobayashi, J., et al. Mech. Ageing Dev. 131(6):436-444(2010)Ehrenberg, M., et al. Mol. Vis. 16, 1771-1775 (2010) :