

Rad51 (179 - 190) Synthetic Peptide Catalog # SP2250a

Specification

Rad51 (179 - 190) - Product Information

Primary Accession Other Accession Sequence

<u>O77507</u> <u>Q08297</u>, <u>Q06609</u>, <u>P70099</u>, <u>Q2KJ94</u>, <u>P37383</u> **NH2-GLSGSDVLDNVA-COOH**

Rad51 (179 - 190) - Additional Information

Gene ID 100008661

Other Names

DNA repair protein RAD51 homolog 1, RAD51

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.

Rad51 (179 - 190) - Protein Information

Name RAD51

Function

Plays an important role in homologous strand exchange, a key step in DNA repair through homologous recombination (HR). Binds to single-stranded DNA in an ATP-dependent manner to form nucleoprotein filaments which are essential for the homology search and strand exchange. Catalyzes the recognition of homology and strand exchange between homologous DNA partners to form a joint molecule between a processed DNA break and the repair template. Recruited to resolve stalled replication forks during replication stress. Part of a PALB2- scaffolded HR complex containing BRCA2 and RAD51C and which is thought to play a role in DNA repair by HR. Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51C and XRCC3. Also involved in interstrand cross- link repair.

Cellular Location

Nucleus {ECO:0000250|UniProtKB:Q06609}. Cytoplasm {ECO:0000250|UniProtKB:Q06609}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:Q06609}. Mitochondrion matrix {ECO:0000250|UniProtKB:Q06609}. Chromosome {ECO:0000250|UniProtKB:Q06609}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome {ECO:0000250|UniProtKB:Q06609} Note=Colocalizes with RAD51AP1 and RPA2 to multiple nuclear foci upon induction of DNA





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damage. DNA damage induces an increase in nuclear levels. Together with FIGNL1, redistributed in discrete nuclear DNA damage-induced foci after ionizing radiation (IR) or camptothecin (CPT) treatment. Accumulated at sites of DNA damage in a SPIDR-dependent manner. Recruited at sites of DNA damage in a MCM9-MCM8-dependent manner. Recruited at sites of DNA damage following interaction with TOPBP1 in S-phase. Colocalizes with ERCC5/XPG to nuclear foci in S phase (By similarity). {ECO:0000250|UniProtKB:Q06609}

Rad51 (179 - 190) - Images