

XRCC1 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP5545c**Specification**

XRCC1 Antibody (Center) Blocking peptide - Product Information

Primary Accession [P18887](#)
Other Accession [NP_006288.2](#)

XRCC1 Antibody (Center) Blocking peptide - Additional Information

Gene ID 7515

Other Names

DNA repair protein XRCC1, X-ray repair cross-complementing protein 1, XRCC1

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.

XRCC1 Antibody (Center) Blocking peptide - Protein Information

Name XRCC1 {ECO:0000303|PubMed:2247054, ECO:0000312|HGNC:HGNC:12828}

Function

Scaffold protein involved in DNA single-strand break repair by mediating the assembly of DNA break repair protein complexes (PubMed: [11163244](http://www.uniprot.org/citations/11163244), PubMed: [28002403](http://www.uniprot.org/citations/28002403)). Negatively regulates ADP- ribosyltransferase activity of PARP1 during base-excision repair in order to prevent excessive PARP1 activity (PubMed: [34102106](http://www.uniprot.org/citations/34102106), PubMed: [34811483](http://www.uniprot.org/citations/34811483), PubMed: [28002403](http://www.uniprot.org/citations/28002403)). Recognizes and binds poly-ADP-ribose chains: specifically binds auto-poly-ADP-ribosylated PARP1, limiting its activity (PubMed: [14500814](http://www.uniprot.org/citations/14500814), PubMed: [34102106](http://www.uniprot.org/citations/34102106), PubMed: [34811483](http://www.uniprot.org/citations/34811483)).

Cellular Location

Nucleus. Chromosome Note=Moves from the nucleoli to the global nuclear chromatin upon DNA damage (PubMed:28002403). Recruited to DNA damage sites following interaction with

poly-ADP-ribose chains (PubMed:14500814)

Tissue Location

Expressed in fibroblasts, retinal pigmented epithelial cells and lymphoblastoid cells (at protein level)

XRCC1 Antibody (Center) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

XRCC1 Antibody (Center) Blocking peptide - Images**XRCC1 Antibody (Center) Blocking peptide - Background**

The protein encoded by this gene is involved in the efficient repair of DNA single-strand breaks formed by exposure to ionizing radiation and alkylating agents. This protein interacts with DNA ligase III, polymerase beta and poly (ADP-ribose) polymerase to participate in the base excision repair pathway. It may play a role in DNA processing during meiosis and recombination in germ cells. A rare microsatellite polymorphism in this gene is associated with cancer in patients of varying radiosensitivity.

XRCC1 Antibody (Center) Blocking peptide - References

Lamerdin, J.E., et al. Genomics 25(2):547-554(1995) Gyapay, G., et al. Nat. Genet. 7 (2 SPEC NO), 246-339 (1994) :Thompson, L.H., et al. Mol. Cell. Biol. 10(12):6160-6171(1990) Thompson, L.H., et al. Genomics 5(4):670-679(1989)