

XRCC4 antibody - middle region
Rabbit Polyclonal Antibody
Catalog # AI10111**Specification**

XRCC4 antibody - middle region - Product Information

Application	WB
Primary Accession	Q13426
Other Accession	Q13426 , NP_071801 , NM_022406
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine, Yeast
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Chicken, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	38 kDa KDa

XRCC4 antibody - middle region - Additional Information**Gene ID** 7518**Other Names**

DNA repair protein XRCC4, X-ray repair cross-complementing protein 4, XRCC4

Target/Specificity

XRCC4 functions together with DNA ligase IV and the DNA-dependent protein kinase in the repair of DNA double-strand break by non-homologous end joining and the completion of V(D)J recombination events. The non-homologous end-joining pathway is required both for normal development and for suppression of tumors. This gene functionally complements XR-1 Chinese hamster ovary cell mutant, which is impaired in DNA double-strand breaks produced by ionizing radiation and restriction enzymes. The protein encoded by this gene functions together with DNA ligase IV and the DNA-dependent protein kinase in the repair of DNA double-strand break by non-homologous end joining and the completion of V(D)J recombination events. The non-homologous end-joining pathway is required both for normal development and for suppression of tumors. This gene functionally complements XR-1 Chinese hamster ovary cell mutant, which is impaired in DNA double-strand breaks produced by ionizing radiation and restriction enzymes. This gene contains 8 exons, and alternative transcription initiation and alternative splicing generates several transcript variants.

Format

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage

Add 50 ul of distilled water. Final anti-XRCC4 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.

Precautions

XRCC4 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

XRCC4 antibody - middle region - Protein Information

Name XRCC4 {ECO:0000303|PubMed:8548796, ECO:0000312|HGNC:HGNC:12831}

Function

[DNA repair protein XRCC4]: DNA non-homologous end joining (NHEJ) core factor, required for double-strand break repair and V(D)J recombination (PubMed:10757784, PubMed:10854421, PubMed:12517771, PubMed:16412978, PubMed:17124166, PubMed:17290226, PubMed:22228831, PubMed:25597996, PubMed:25742519, PubMed:25934149, PubMed:26100018, PubMed:26774286, PubMed:8548796). Acts as a scaffold protein that regulates recruitment of other proteins to DNA double-strand breaks (DSBs) (PubMed:15385968, PubMed:20852255, PubMed:26774286, PubMed:27437582). Associates with NHEJ1/XLF to form alternating helical filaments that bridge DNA and act like a bandage, holding together the broken DNA until it is repaired (PubMed:21768349, PubMed:21775435, PubMed:22287571, PubMed:26100018, PubMed:27437582, PubMed:28500754). The XRCC4-NHEJ1/XLF subcomplex binds to the DNA fragments of a DSB in a highly diffusive manner and robustly bridges two independent DNA molecules, holding the broken DNA fragments in close proximity to one other (PubMed:27437582). The mobility of the bridges ensures that the ends remain accessible for further processing by other repair factors (PubMed:27437582). Plays a key role in the NHEJ ligation step of the broken DNA during DSB repair via direct interaction with DNA ligase IV (LIG4): the LIG4-XRCC4 subcomplex reseals the DNA breaks after the gap filling is completed (PubMed:10757784, PubMed:10854421, PubMed:12517771, PubMed:17290226, PubMed:19837014, PubMed:9242410). XRCC4 stabilizes LIG4, regulates its subcellular localization and enhances LIG4's joining activity (PubMed:10757784, PubMed:10854421, PubMed:12517771, PubMed:17290226, PubMed:21982441, PubMed:22228831, PubMed:9242410).

target="_blank">9242410). Binding of the LIG4-XRCC4 subcomplex to DNA ends is dependent on the assembly of the DNA-dependent protein kinase complex DNA-PK to these DNA ends (PubMed:10757784, PubMed:10854421). Promotes displacement of PNKP from processed strand break termini (PubMed:20852255, PubMed:28453785).

Cellular Location

Nucleus. Chromosome. Note=Localizes to site of double-strand breaks.

Tissue Location

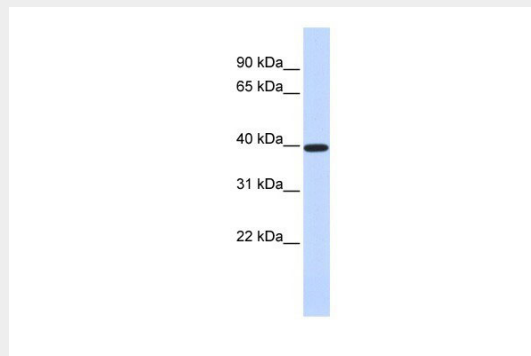
Widely expressed..

XRCC4 antibody - middle region - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

XRCC4 antibody - middle region - Images



XRCC4 antibody - middle region (AI10111) in Human Placenta cells using Western Blot
WB Suggested Anti-XRCC4 Antibody Titration: 0.2-1 µg/ml
ELISA Titer: 1:2500
Positive Control: Human Placenta

XRCC4 antibody - middle region - Background

This is a rabbit polyclonal antibody against XRCC4. It was validated on Western Blot using a cell lysate as a positive control. Abgent strives to provide antibodies covering each member of a whole protein family of your interest. We also use our best efforts to provide you antibodies recognize various epitopes of a target protein. For availability of antibody needed for your experiment, please inquire (sales@abgent.com).