10320 Camino Santa Fe, Suite G
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Anti-XRCC1 Antibody
Catalog # ABO10953

Specification

Anti-XRCC1 Antibody - Product Information

Application	**WB, IHC, ICC**
Primary Accession	P18887
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for DNA repair protein XRCC1(XRCC1) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-XRCC1 Antibody - Additional Information

Gene ID 7515

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

Calculated MW
69477 MW KDa

Application Details
Immunocytochemistry , 0.5-1 µg/ml, Human, Mouse, Rat
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Nucleus . Accumulates at sites of DNA damage.

Protein Name
DNA repair protein XRCC1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the N-terminus of human XRCC1(15-34aa QDSTHCAENLLKADTYRKWR), identical to the related mouse sequence, and different from the related rat sequence by one amino acid.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Contains 2 BRCT domains.

Anti-XRCC1 Antibody - 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, PubMed:28002403). Negatively regulates ADP- ribosyltransferase activity of PARP1 during base-excision repair in order to prevent excessive PARP1 activity (PubMed:28002403, PubMed:34102106, PubMed:34811483). Recognizes and binds poly-ADP-ribose chains: specifically binds auto-poly-ADP-ribosylated PARP1, limiting its activity (PubMed:14500814, PubMed:34102106, PubMed: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 fowwing interaction with poly-ADP-ribose chains (PubMed:14500814)

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

Anti-XRCC1 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-XRCC1 Antibody - Images

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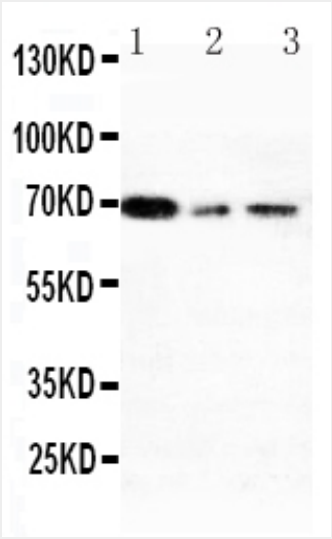
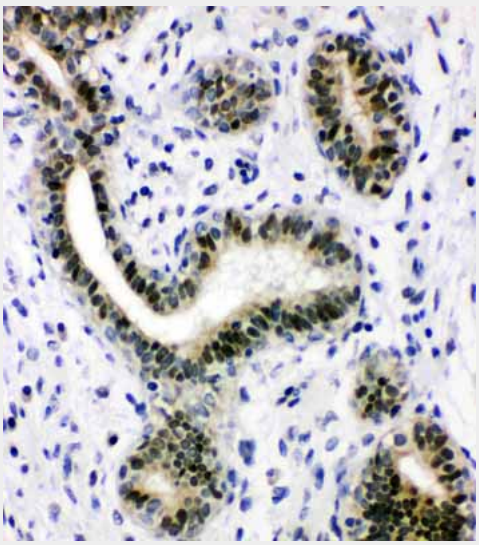


Anti-XRCC1 antibody, ABO10953, Western blottingLane 1: 293T Cell LysateLane 2: A431 Cell LysateLane 3: HELA Cell Lysate



Anti-XRCC1 antibody, ABO10953, IHC(P)IHC(P): Human Mammary Cancer Tissue

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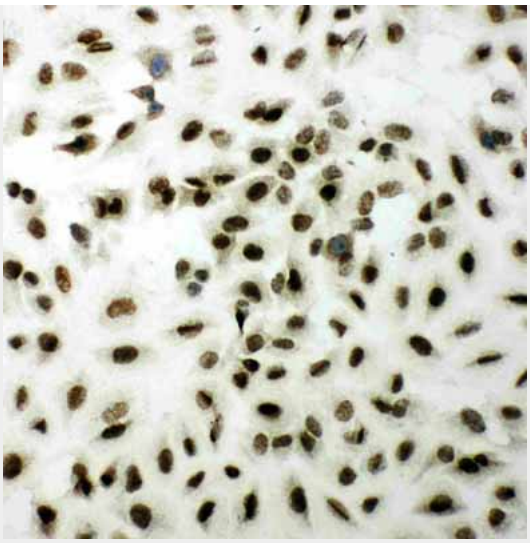

Anti-XRCC1 antibody, ABO10953, ICCICC: A549 Cell

Anti-XRCC1 Antibody - Background

XRCC1(X-RAY REPAIR, COMPLEMENTING DEFECTIVE, IN CHINESE HAMSTER, 1) is a DNA repair protein which complexes with DNA ligase III. 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. The XRCC1 gene is mapped to 19q13.31. The XRCC1 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 meiogenesis and recombination in germ cells. A rare microsatellite polymorphism in this gene is associated with cancer in patients of varying radiosensitivity. XRCC1 is phosphorylated in vivo and in vitro by CK2, and CK2 phosphorylation of XRCC1 on ser518, thr519, and thr523 largely determines aprataxin binding to XRCC1 through its FHA domain.