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Anti-XRCC1 Antibody

Catalog # AP51615

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P18887
Reactivity	Human, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	69498

Additional Information

Gene ID	7515
Other Names	DNA repair protein XRCC1; X-ray repair cross-complementing protein 1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human XRCC1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

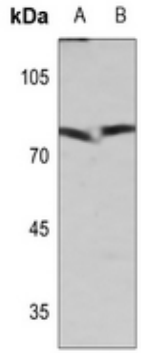
Protein Information

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)

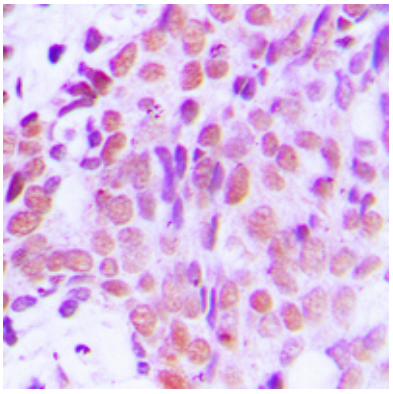
References

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Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Grimwood J.,et al.Nature 428:529-535(2004).
Whitehouse C.J.,et al.Cell 104:107-117(2001).
Sano Y.,et al.Ann. Neurol. 55:241-249(2004).

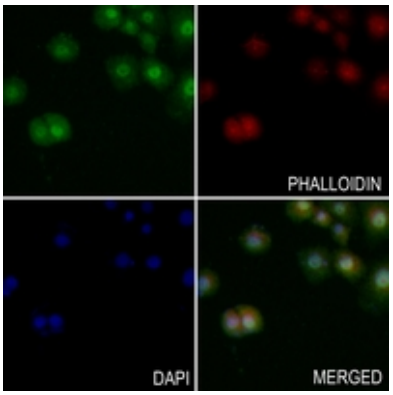
Images



Western blot analysis of XRCC1 expression in A549 (A), U2OS (B) whole cell lysates. (Predicted band size: 69 kD; Observed band size: 82 kD)



Immunohistochemical analysis of XRCC1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of XRCC1 staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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