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RAD23B Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2174b

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P54727
Other Accession	Q4KMA2, P54728, Q29RK4, P54726, P54725, A3KMV2
Reactivity	Human
Predicted	Mouse, Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4546
Calculated MW	43171
Antigen Region	349-379

Additional Information

Gene ID	5887
Other Names	UV excision repair protein RAD23 homolog B, HR23B, hHR23B, XP-C repair-complementing complex 58 kDa protein, p58, RAD23B
Target/Specificity	This RAD23B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 349-379 amino acids from the C-terminal region of human RAD23B.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RAD23B Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAD23B (HGNC:9813)
Function	Multifunctional protein that participates in histone H4K20 demethylation,

	DNA repair, ubiquitin-dependent protein degradation and transcriptional regulation (PubMed:10488153, PubMed:32209475, PubMed:9372924). Specifically demethylates mono-, di- and trimethylated 'Lys-20' of histone H4 (H4K20me1, H4K20me2, H4K20me3, respectively) into unmethylated forms. Activates the transcription of coding genes by demethylating H4K20me1 and the transcription of repetitive elements by demethylating H4K20me3 (PubMed:32209475). Multiubiquitin chain receptor involved in modulation of proteasomal degradation. Binds to polyubiquitin chains. Proposed to be capable to bind simultaneously to the 26S proteasome and to polyubiquitinated substrates and to deliver ubiquitinated proteins to the proteasome (PubMed:10488153, PubMed:19435460). May play a role in endoplasmic reticulum-associated degradation (ERAD) of misfolded glycoproteins by association with PNGase and delivering deglycosylated proteins to the proteasome (PubMed:15358861). Involved in global genome nucleotide excision repair (GG-NER) by acting as component of the XPC complex, a nucleotide- excision repair complex that is involved in damage sensing during global genome nucleotide excision repair. In vitro, the XPC:RAD23B dimer is sufficient to initiate NER; it preferentially binds to cisplatin and UV-damaged double-stranded DNA. Recognizes a wide spectrum of damaged DNA characterized by distortions of the DNA helix including single-stranded loops, mismatched bubbles or single-stranded overhangs. Cooperatively with CETN2 appears to stabilize XPC (PubMed:10873465, PubMed:12815074, PubMed:9372924).
Cellular Location	Nucleus. Cytoplasm Note=The intracellular distribution is cell cycle dependent. Localized to the nucleus and the cytoplasm during G1 phase. Nuclear levels decrease during S-phase; upon entering mitosis, relocalizes in the cytoplasm without association with chromatin
Tissue Location	[Isoform 2]: Highly expressed in the testis and in ejaculated spermatozoa.

Background

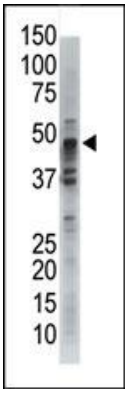
RAD23B is one of two human homologs of Saccharomyces cerevisiae Rad23, a protein involved in the nucleotide excision repair (NER). This protein was found to be a component of the protein complex that specifically complements the NER defect of xeroderma pigmentosum group C (XP-c) cell extracts in vitro. This protein was also shown to interact with, and elevate the nucleotide excision activity of 3-methyladenine-DNA glycosylase (MPG), which suggested a role in DNA damage recognition in base excision repair. This protein contains an N-terminal ubiquitin-like domain, which was reported to interact with 26S proteasome, and thus this protein may be involved in the ubiquitin mediated proteolytic pathway in cells.

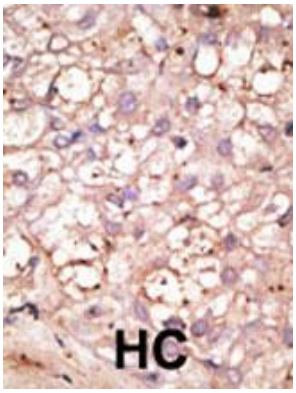
References

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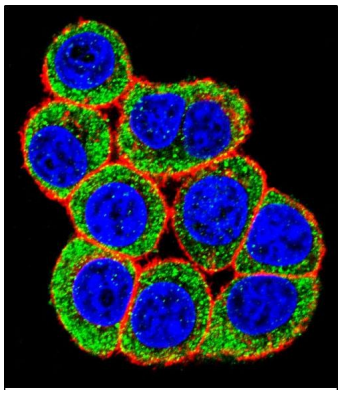
Images

The anti-RAD23B Pab (Cat. #AP2174b) is used in Western blot to detect RAD23B in HeLa cell lysate.





Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Confocal immunofluorescent analysis of RAD23B Antibody (C-term)(Cat#AP2174b) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.