10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-RAD23B Antibody

Catalog # AP96026

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	P54727
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Calculated MW	43171

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
Target/Specificity	Recombinant fusion protein of human RAD23B expressed in E. Coli
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/100 - 1/200) IF/IC~~N/A
Format	Mouse IgG1. Liquid in PBS, 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	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).

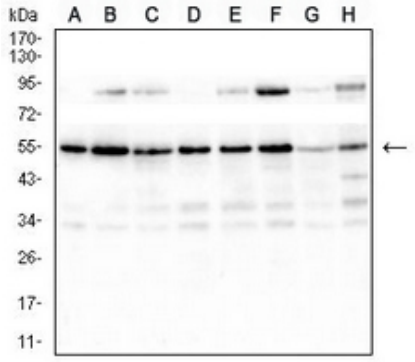
Cellular Location

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

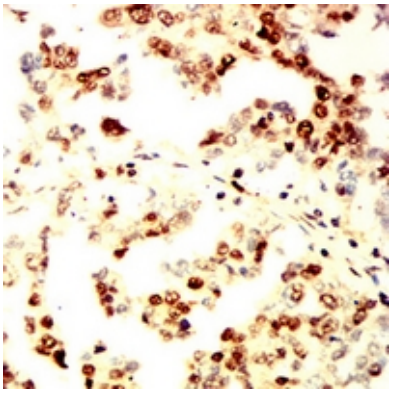
Tissue Location

[Isoform 2]: Highly expressed in the testis and in ejaculated spermatozoa.

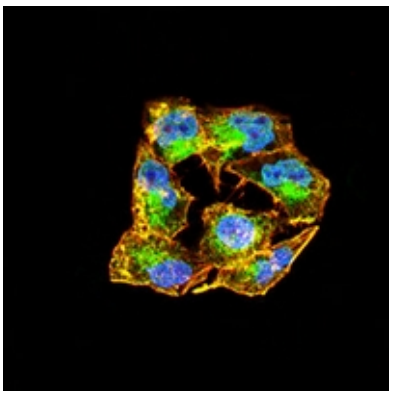
Images



Western blot analysis of RAD23B expression in K562 (A), Hela (B), A431 (C), HL60 (D), Jurkat (E), A549 (F), HUVEC (G), NIH/3T3 (H) whole cell lysates. (Predicted band size: 43 kD; Observed band size: 55 kD)

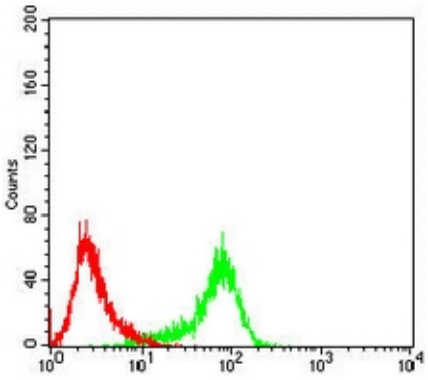


Immunohistochemical analysis of RAD23B staining in human ovarian cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected 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 RAD23B 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 an 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).

Flow cytometric analysis of Jurkat cells using Anti-RAD23B Antibody (green) and negative control (red).



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