RAD23B monoclonal antibody

Catalog: MB66580 Host: Mouse Reactivity: Human, Mouse, Rat, Monkey, Hamster

BackGround:

The yeast nucleotide excision repair (NER) radiation sensitive protein 23 (rad23) and its human homologs Rad23A (hHR23A) and Rad23B (hHR23B) are critical components of the cellular machinery that recognize DNA lesions and serve as receptors that target ubiquitinated substrates to the proteasome for degradation. The UV excision repair protein Rad23B is a multi-domain scaffold protein that plays an important role in ubiquitin-dependent proteasomal degradation. Rad23B contains an amino-terminal ubiquitin-like (UbL) domain that facilitates interaction with the S5a/PSMD4 subunit of the proteasome 19S regulatory complex. In addition, Rad23B contains a central ubiquitin-associated domain (UBA1) and a carboxy-terminal UBA2 domain, which bind mono- and polyubiquitin with distinct specificities. Research studies demonstrate that Rad23B binds specifically to K48-ubiquitinated proteins to facilitate recruitment of target proteins to the proteasome. Between the paired UBA domains, Rad23B contains an XPC-binding domain that facilitates binding to XPC and recruitment to DNA lesions, as well as the binding of peptide:N-glycanase that is critical for recruitment of ubiquitinated ERAD substrates to the proteasome. Research studies have shown that targeted deletion of the murine Rad23b locus impairs embryonic development, suggesting that Rad23B is essential for mammalian development.

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 58 kDa

Swiss-Prot:

P54727

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/100), IF/ICC (1/50 - 1/100)

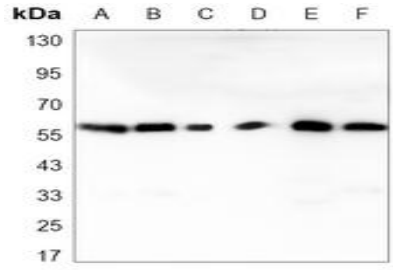
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

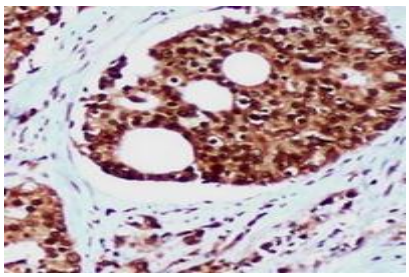
Specificity:

Recognizes endogenous levels of RAD23B protein.

DATA:



Western blot analysis of RAD23B expression in A431 (A), K562 (B), Jurkat (C), C6 (D), NIH3T3 (E), Hela (F) whole cell lysates.



Immunohistochemical analysis of RAD23B staining in human prostate cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.103). 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.

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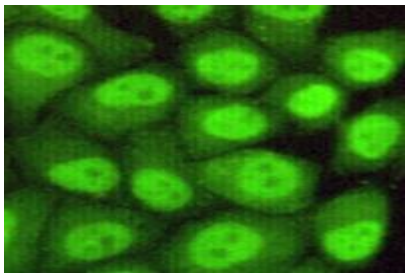

Immunofluorescent analysis of RAD23B staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 ℃ 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.

Note:

For research use only, not for use in diagnostic procedure.

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