

Rad23B (m): 293T Lysate: sc-125881

BACKGROUND

Mammalian cells express two Rad23 (genome repair protein) homologs, Rad23A (also designated HR23A) and Rad23B (also designated HR23B). In typical cells, mouse Rad23B is approximately ten times more abundant than mouse Rad23A. Endogenous XPC (xeroderma pigmentosum C protein) located in wildtype mouse embryonic fibroblasts is relatively stable; its steady-state level and stability appear to be significantly reduced by a targeted interruption of the mouse Rad23B gene, but not by that of mouse Rad23A. Loss of both mouse Rad23 genes causes a strong further reduction of the XPC protein level. RAD23, the gene encoding for the Rad23 protein, is crucial for excision-repair of UV-damaged DNA. RAD23 resembles the other DNA repair genes, RAD2, RAD6, RAD7, RAD18 and RAD54, all of which also exhibit increased transcription in response to DNA damage and during meiosis. Rad23 is a nuclear protein containing a ubiquitin-like domain required for biological functions. It is a highly conserved protein involved in nucleotide excision repair (NER) that associates with the proteasome via its N-terminus. Its C-terminal ubiquitin-associated domain is evolutionarily conserved from yeast to humans. Rad23 may also act as a regulator for the activity of the 26S proteasome.

REFERENCES

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6. Hsieh, H.C., et al. 2005. hHR23A, a human homolog of *Saccharomyces cerevisiae* Rad23, regulates xeroderma pigmentosum C protein and is required for nucleotide excision repair. *Biochem. Biophys. Res. Commun.* 335: 181-187.
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8. Heessen, S., Masucci, M.G. and Dantuma, N.P. 2005. The UBA2 domain functions as an intrinsic stabilization signal that protects Rad23 from proteasomal degradation. *Mol. Cell* 18: 225-235.
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CHROMOSOMAL LOCATION

Genetic locus: Rad23b (mouse) mapping to 4 B3.

PRODUCT

Rad23B (m): 293T Lysate represents a lysate of mouse Rad23B transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Rad23B (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Rad23B antibodies. Recommended use: 10-20 µl per lane.

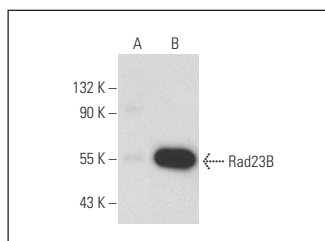
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Rad23B (H-8): sc-137088 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Rad23B expression in Rad23B transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

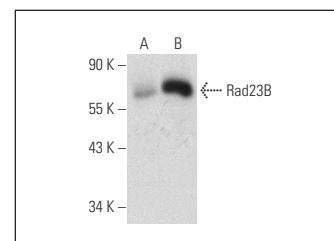
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Rad23B (H-8): sc-137088. Western blot analysis of Rad23B expression in non-transfected: sc-117752 (A) and mouse Rad23B transfected: sc-125881 (B) 293T whole cell lysates.



Rad23B (C-4): sc-166507. Western blot analysis of Rad23B expression in non-transfected: sc-117752 (A) and mouse Rad23B transfected: sc-125881 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.