SANTA CRUZ BIOTECHNOLOGY, INC.

DDX47 (h): 293T Lysate: sc-117224

BACKGROUND

DEAD-box proteins, characterized by the conserved motif Asp-Glu-Ala-Asp, are putative RNA helicases implicated in several cellular processes involving modifications of RNA secondary structure and ribosome/spliceosome assembly. Based on their distribution patterns, some members of this family may be involved in embryogenesis, spermatogenesis and cellular growth and division. DDX47 (probable ATP-dependent RNA helicase DDX47) is a 455 amino acid protein encoded by the human gene DDX47. DDX47 belongs to the DEAD-box helicase family (DDX47/RRP3 subfamily) and contains one helicase ATP-binding domain and one helicase C-terminal domain. DDX47 is believed to be a probable ATP-dependent RNA helicase. RNA helicases are highly conserved enzymes that utilize the energy derived from NTP hydrolysis to modulate the structure of RNA. RNA helicases participate in all biological processes that involve RNA, including transcription, splicing and translation.

REFERENCES

1. O'Day, C.L., Chavanikamannil, F. and Abelson, J. 1996. 18S rRNA processing requires the RNA helicase-like protein Rrp3. Nucleic Acids Res. 24: 3201-3207.
2. Doorbar, J., Elston, R.C., Napthine, S., Raj, K., Medcalf, E., Jackson, D., Coleman, N., Griffin, H.M., Masterson, P., Stacey, S., Mengistu, Y. and Dunlop, J. 2000. The E1E4 protein of human papillomavirus type 16 associates with a putative RNA helicase through sequences in its C terminus. J. Virol. 74: 10081-10095.
3. Regard, J.B., Scheek, S., Borbiev, T., Lanahan, A.A., Schneider, A., Demetriades, A.M., Hiemisch, H., Barnes, C.A., Verin, A.D. and Worley, P.F. 2004. Verge: a novel vascular early response gene. J. Neurosci. 24: 4092-4103.
4. Abdelhaleem, M. 2005. RNA helicases: regulators of differentiation. Clin. Biochem. 38: 499-503.
5. Lee, J.H., Rho, S.B. and Chun, T. 2005. GABAA receptor-associated protein (GABARAP) induces apoptosis by interacting with DEAD (Asp-Glu-Ala-Asp/His) box polypeptide 47 (DDX47). Biotechnol. Lett. 27: 623-628.
6. Nousiainen, M., Silljé, H.H., Sauer, G., Nigg, E.A. and Körner, R. 2006. Phosphoproteome analysis of the human mitotic spindle. Proc. Natl. Acad. Sci. USA 103: 5391-5396.
7. Sekiguchi, T., Hayano, T., Yanagida, M., Takahashi, N. and Nishimoto, T. 2006. NOP132 is required for proper nucleolus localization of DEAD-box RNA helicase DDX47. Nucleic Acids Res. 34: 4593-4608.

CHROMOSOMAL LOCATION

Genetic locus: DDX47 (human) mapping to 12p13.1.

PRODUCT

DDX47 (h): 293T Lysate represents a lysate of human DDX47 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

DDX47 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive DDX47 antibodies. Recommended use: 10-20 µl per lane.

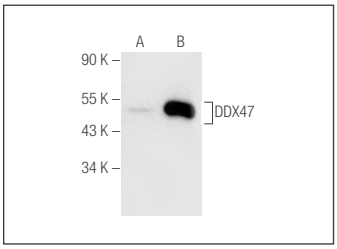
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

DDX47 (H-9): sc-377333 is recommended as a positive control antibody for Western Blot analysis of enhanced human DDX47 expression in DDX47 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



DDX47 (H-9): sc-377333. Western blot analysis of DDX47 expression in non-transfected: sc-117752 (**A**) and human DDX47 transfected: sc-117224 (**B**) 293T whole cell lysates.

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.