

DDX59 (B-3): sc-514814

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. DDX59 (DEAD box protein 59), also known as ZNHIT5 (zinc finger HIT domain-containing protein 5), is a 619 amino acid member of the DEAD box helicase protein family. Like many DEAD box helicase family members, DDX59 contains a Q motif, which controls ATP binding and hydrolysis. Expressed as two isoforms produced by alternative splicing, DDX59 contains one helicase C-terminal domain and one HIT-type zinc finger.

REFERENCES

- Schmid, S.R. and Linder, P. 1992. D-E-A-D protein family of putative RNA helicases. *Mol. Microbiol.* 6: 283-291.
- Simpson, J.C., Wellenreuther, R., Poustka, A., Pepperkok, R. and Wiemann, S. 2000. Systematic subcellular localization of novel proteins identified by large-scale cDNA sequencing. *EMBO Rep.* 1: 287-292.
- Tanner, N.K. and Linder, P. 2001. DEXD/H box RNA helicases: from generic motors to specific dissociation functions. *Mol. Cell* 8: 251-262.
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- Abdelhaleem, M., Maltais, L. and Wain, H. 2003. The human DDX and DHX gene families of putative RNA helicases. *Genomics* 81: 618-622.
- Cordin, O., Banroques, J., Tanner, N.K. and Linder, P. 2006. The DEAD-box protein family of RNA helicases. *Gene* 367: 17-37.
- Linder, P. 2006. Dead-box proteins: a family affair—active and passive players in RNP-remodeling. *Nucleic Acids Res.* 34: 4168-4180.

CHROMOSOMAL LOCATION

Genetic locus: DDX59 (human) mapping to 1q32.1.

SOURCE

DDX59 (B-3) is a mouse monoclonal antibody raised against amino acids 1-250 mapping at the N-terminus of DDX59 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

DDX59 (B-3) is recommended for detection of DDX59 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DDX59 siRNA (h): sc-88841, DDX59 shRNA Plasmid (h): sc-88841-SH and DDX59 shRNA (h) Lentiviral Particles: sc-88841-V.

Molecular Weight of DDX59: 69 kDa.

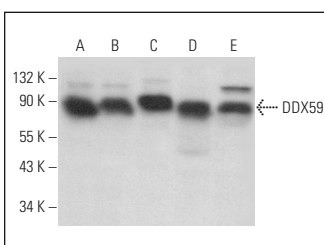
Positive Controls: MCF7 whole cell lysate: sc-2206, human liver extract: sc-363766 or A549 cell lysate: sc-2413.

RECOMMENDED SUPPORT REAGENTS

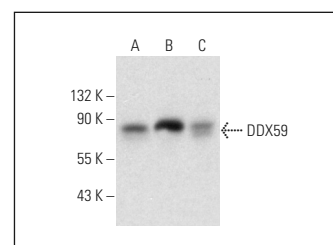
To ensure optimal results, the following support reagents are recommended:

- 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DDX59 (B-3): sc-514814. Western blot analysis of DDX59 expression in MCF7 (A), A-431 (B), BC₃H1 (C), MDA-MB-231 (D) and SJRH30 (E) whole cell lysates.



DDX59 (B-3): sc-514814. Western blot analysis of DDX59 expression in MCF7 (A) and A549 (B) whole cell lysates and human liver tissue extract (C).

SELECT PRODUCT CITATIONS

- Qiu, Y., Qu, B., Zhen, Z., Yuan, X., Zhang, L. and Zhang, M. 2019. Leucine promotes milk synthesis in bovine mammary epithelial cells via the PI3K-DDX59 signaling. *J. Agric. Food Chem.* 67: 8884-8895.

RESEARCH USE

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