

# DDX59 (C-3): sc-514439

## 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., et al. 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.
- Xu, J., et al. 2002. Identification of a novel human DDX40 gene, a new member of the DEAH-box protein family. *J. Hum. Genet.* 47: 681-683.
- Abdelhaleem, M., et al. 2003. The human DDX and DHX gene families of putative RNA helicases. *Genomics* 81: 618-622.
- Cordin, O., et al. 2006. The DEAD-box protein family of RNA helicases. *Gene* 367: 17-37.

## CHROMOSOMAL LOCATION

Genetic locus: DDX59 (human) mapping to 1q32.1; Ddx59 (mouse) mapping to 1 E4.

## SOURCE

DDX59 (C-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-22 at the N-terminus of DDX59 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DDX59 (C-3) is available conjugated to agarose (sc-514439 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514439 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514439 PE), fluorescein (sc-514439 FITC), Alexa Fluor® 488 (sc-514439 AF488), Alexa Fluor® 546 (sc-514439 AF546), Alexa Fluor® 594 (sc-514439 AF594) or Alexa Fluor® 647 (sc-514439 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514439 AF680) or Alexa Fluor® 790 (sc-514439 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514439 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

DDX59 (C-3) is recommended for detection of DDX59 of mouse, rat and 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 siRNA (m): sc-105282, DDX59 shRNA Plasmid (h): sc-88841-SH, DDX59 shRNA Plasmid (m): sc-105282-SH, DDX59 shRNA (h) Lentiviral Particles: sc-88841-V and DDX59 shRNA (m) Lentiviral Particles: sc-105282-V.

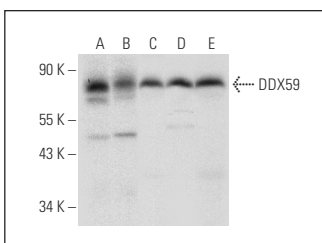
Molecular Weight of DDX59: 69 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

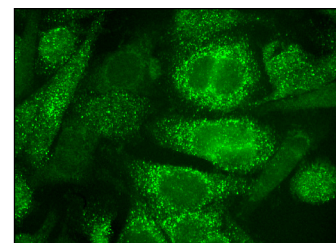
## RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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 (C-3): sc-514439. Western blot analysis of DDX59 expression in HeLa nuclear extract (A) and HeLa (B), MCF7 (C), HCT-116 (D) and A549 (E) whole cell lysates.



DDX59 (C-3): sc-514439. Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and nuclear localization.

## STORAGE

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

## RESEARCH USE

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

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