SANTA CRUZ BIOTECHNOLOGY, INC.

DDX39 (N-12): sc-68965

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The Power to Question

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. DDX39 (DEAD box protein 39), also known as URH49, is a 427 amino acid protein that belongs to the DEAD-box family and contains one helicase C-terminal domain and one helicase ATP-binding domain. Localized to the nucleus and expressed in lung, brain, kidney, spleen, thymus and salivary gland, DDX39 is involved in pre-mRNA splicing and is required for mRNA export out of the nucleus. DDX39 expression is upregulated in lung squamous cell carcinoma, suggesting a role for DDX39 in tumorigenesis.

REFERENCES

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2. Strässer, K., Masuda, S., Mason, P., Pfannstiel, J., Oppizzi, M., Rodriguez-Navarro, S., Rondón, A.G., Aguilera, A., Struhl, K., Reed, R. and Hurt, E. 2002. TREX is a conserved complex coupling transcription with messenger RNA export. Nature 417: 304-308.
3. Pryor, A., Tung, L., Yang, Z., Kapadia, F., Chang, T.H. and Johnson, L.F. 2004. Growth-regulated expression and G_0-specific turnover of the mRNA that encodes URH49, a mammalian DEXH/D box protein that is highly related to the mRNA export protein UAP56. Nucleic Acids Res. 32: 1857-1865.
4. Kapadia, F., Pryor, A., Chang, T.H. and Johnson, L.F. 2006. Nuclear localization of poly(A)$^+$ mRNA following siRNA reduction of expression of the mammalian RNA helicases UAP56 and URH49. Gene 384: 37-44.
5. Sugiura, T., Nagano, Y. and Noguchi, Y. 2007. DDX39, upregulated in lung squamous cell cancer, displays RNA helicase activities and promotes cancer cell growth. Cancer Biol. Ther. 6: 957-964.
6. Sugiura, T., Sakurai, K. and Nagano, Y. 2007. Intracellular characterization of DDX39, a novel growth-associated RNA helicase. Exp. Cell Res. 313: 782-790.

CHROMOSOMAL LOCATION

Genetic locus: DDX39 (human) mapping to 19p13.12; Ddx39 (mouse) mapping to 8 C2.

SOURCE

DDX39 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DDX39 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-68965 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-68965 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDX39 (N-12) is recommended for detection of DDX39 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

DDX39 (N-12) is also recommended for detection of DDX39 in additional species, including canine.

Suitable for use as control antibody for DDX39 siRNA (h): sc-77111, DDX39 siRNA (m): sc-77112, DDX39 shRNA Plasmid (h): sc-77111-SH, DDX39 shRNA Plasmid (m): sc-77112-SH, DDX39 shRNA (h) Lentiviral Particles: sc-77111-V and DDX39 shRNA (m) Lentiviral Particles: sc-77112-V.

DDX39 (N-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of DDX39: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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