SANTA CRUZ BIOTECHNOLOGY, INC.

DDX56 (F-3): sc-393077

SANTA CRUZ BIOTECHNOLOGY

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. DDX56 (DEAD box polypeptide 56), also known as DDX21 or NOH61, contains a helicase core region, a leucine zipper motif in its N-terminus, two putative C-terminal nuclear localization signals and several potential phosphorylation sites. DDX56 may be involved in ribosome synthesis, specifically during assembly of the large 60S ribosomal subunit.

REFERENCES

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2. Imamura, O., et al. 1997. Cloning and characterization of a putative human RNA helicase gene of the DEAH-box protein family. Biochem. Biophys. Res. Commun. 240: 335-340.
3. Eisen, A., et al. 1998. A novel DEAD-box RNA helicase exhibits high sequence conservation from yeast to humans. Biochim. Biophys. Acta 1397: 131-136.
4. Zirwes, R.F., et al. 2000. A novel helicase-type protein in the nucleolus: protein NOH61. Mol. Biol. Cell 11: 1153-1167.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608023. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Zhang, D.Y., et al. 2006. Molecular cloning and characterization of a putative nuclear DEAD box RNA helicase in the spruce budworm, *Choristoneura fumiferana*. Arch. Insect. Biochem. Physiol. 61: 209-219.
7. Jain, C. 2008. The *E. coli* RhlE RNA helicase regulates the function of related RNA helicases during ribosome assembly. RNA 14: 381-389.
8. Theissen, B., et al. 2008. Cooperative binding of ATP and RNA induces a closed conformation in a DEAD box RNA helicase. Proc. Natl. Acad. Sci. USA 105: 548-553.

CHROMOSOMAL LOCATION

Genetic locus: DDX56 (human) mapping to 7p13.

SOURCE

DDX56 (F-3) is a mouse monoclonal antibody raised against amino acids 373-514 mapping near the C-terminus of DDX56 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-393077 X, 200 µg/0.1 ml.

APPLICATIONS

DDX56 (F-3) is recommended for detection of DDX56 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 DDX56 siRNA (h): sc-89835, DDX56 shRNA Plasmid (h): sc-89835-SH and DDX56 shRNA (h) Lentiviral Particles: sc-89835-V.

DDX56 (F-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

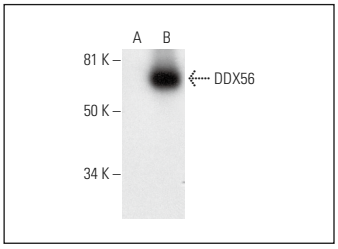
Molecular Weight of DDX56: 62 kDa.

Positive Controls: DDX56 (h): 293 Lysate: sc-110647.

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



DDX56 (F-3): sc-393077. Western blot analysis of DDX56 expression in non-transfected: sc-110760 (**A**) and human DDX56 transfected: sc-110647 (**B**) 293 whole cell lysates.

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.

PROTOCOLS

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