

DDX51 (S-16): sc-132263

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 such as translation initiation, nuclear and mitochondrial splicing, and ribosome and spliceosome assembly. Based on their distribution patterns, some members of this family may be involved in embryogenesis, spermatogenesis, and cellular growth and division. DEAD box protein 51 (DDX51), also known as ATP-dependent RNA helicase DDX51, is a 666 amino acid protein belonging to the DEAD box helicase family. Localized to the nucleus, DDX51 serves as an ATP-binding RNA helicase involved in the biogenesis of 60S ribosomal subunits. DDX51 contains one helicase ATP-binding domain and one helicase C-terminal domain.

REFERENCES

- Silverman, E., et al. 2003. DExD/H-box proteins and their partners: helping RNA helicases unwind. *Gene* 312: 1-16.
- Yang, Q., et al. 2005. ATP- and ADP-dependent modulation of RNA unwinding and strand annealing activities by the DEAD-box protein DED1. *Biochemistry* 44: 13591-13601.
- Cordin, O., et al. 2006. The DEAD-box protein family of RNA helicases. *Gene* 367: 17-37.
- Tuteja, R., et al. 2006. Unraveling the "DEAD-box" helicases of *Plasmodium falciparum*. *Gene* 376: 1-12.
- Yang, Q., et al. 2006. The DEAD-box protein Ded1 unwinds RNA duplexes by a mode distinct from translocating helicases. *Nat. Struct. Mol. Biol.* 13: 981-986.
- Taylor, K.H., et al. 2007. Large-scale CpG methylation analysis identifies novel candidate genes and reveals methylation hotspots in acute lymphoblastic leukemia. *Cancer Res.* 67: 2617-2625.
- Yang, Q., et al. 2007. DEAD-box proteins unwind duplexes by local strand separation. *Mol. Cell* 28: 253-263.
- Chen, Y., et al. 2008. DEAD-box proteins can completely separate an RNA duplex using a single ATP. *Proc. Natl. Acad. Sci. USA* 105: 20203-20208.
- Liu, F., et al. 2008. ATP hydrolysis is required for DEAD-box protein recycling but not for duplex unwinding. *Proc. Natl. Acad. Sci. USA* 105: 20209-20214.

CHROMOSOMAL LOCATION

Genetic locus: DDX51 (human) mapping to 12q24.33; Ddx51 (mouse) mapping to 5 F.

SOURCE

DDX51 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DDX51 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.

Blocking peptide available for competition studies, sc-132263 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDX51 (S-16) is recommended for detection of DDX51 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); non cross-reactive with other DDX family members.

DDX51 (S-16) is also recommended for detection of DDX51 in additional species, including equine and bovine.

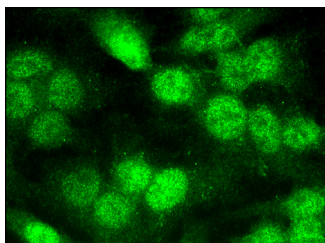
Suitable for use as control antibody for DDX51 siRNA (h): sc-95667, DDX51 siRNA (m): sc-142943, DDX51 shRNA Plasmid (h): sc-95667-SH, DDX51 shRNA Plasmid (m): sc-142943-SH, DDX51 shRNA (h) Lentiviral Particles: sc-95667-V and DDX51 shRNA (m) Lentiviral Particles: sc-142943-V.

Molecular Weight of DDX51: 72 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.

DATA



DDX51 (S-16): sc-132263. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization.

RESEARCH USE

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