

DDX10 (M-13): sc-132642

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. DDX10 (DEAD (Asp-Glu-Ala-Asp) box polypeptide 10), also known as HRH-J8, is an 875 amino acid ATP-dependent RNA helicase that is widely expressed and belongs to the DEAD box helicase family. Highly expressed in testis, DDX10 may be involved in ribosome assembly. It is suggested that defects in the gene encoding DDX10 may be a cause of breast cancer. DDX10 contains a helicase ATP-binding domain and a helicase C-terminal domain.

REFERENCES

1. Savitsky, K., et al. 1996. A human gene (DDX10) encoding a putative DEAD-box RNA helicase at 11q22-q23. *Genomics* 33: 199-206.
2. Arai, Y., et al. 1997. The inv(11)(p15q22) chromosome translocation of *de novo* and therapy-related myeloid malignancies results in fusion of the nucleoporin gene, Nup98, with the putative RNA helicase gene, DDX10. *Blood* 89: 3936-3944.
3. Ikeda, T., et al. 1999. The inv(11)(p15q22) chromosome translocation of therapy-related myelodysplasia with Nup98-DDX10 and DDX10-Nup98 fusion transcripts. *Int. J. Hematol.* 69: 160-164.
4. Nakao, K., et al. 2000. Fusion of the nucleoporin gene, Nup98, and the putative RNA helicase gene, DDX10, by inversion 11 (p15q22) chromosome translocation in a patient with etoposide-related myelodysplastic syndrome. *Intern. Med.* 39: 412-415.
5. Will, C.L., et al. 2002. Characterization of novel SF3b and 17S U2 snRNP proteins, including a human Prp5p homologue and an SF3b DEAD-box protein. *EMBO J.* 21: 4978-4988.
6. Abdelhaleem, M., et al. 2003. The human DDX and DHX gene families of putative RNA helicases. *Genomics* 81: 618-622.
7. Xu, Y.Z., et al. 2004. Prp5 bridges U1 and U2 snRNPs and enables stable U2 snRNP association with intron RNA. *EMBO J.* 23: 376-385.
8. Cordin, O., et al. 2004. The newly discovered Q motif of DEAD-box RNA helicases regulates RNA-binding and helicase activity. *EMBO J.* 23: 2478-2487.
9. Morerio, C., et al. 2006. Inversion (11)(p15q22) with NUP98-DDX10 fusion gene in pediatric acute myeloid leukemia. *Cancer Genet. Cytogenet.* 171: 122-125.

CHROMOSOMAL LOCATION

Genetic locus: Ddx10 (mouse) mapping to 9 A5.3.

SOURCE

DDX10 (M-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DDX10 of mouse origin.

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-132642 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DDX10 (M-13) is recommended for detection of DDX10 of mouse and rat 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.

DDX10 (M-13) is also recommended for detection of DDX10 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for DDX10 siRNA (m): sc-142920, DDX10 shRNA Plasmid (m): sc-142920-SH and DDX10 shRNA (m) Lentiviral Particles: sc-142920-V.

Molecular Weight of DDX10: 101 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.

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 or our catalog for detailed protocols and support products.