SANTA CRUZ BIOTECHNOLOGY, INC.

DDX23 (K-24): sc-133504

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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 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. DDX23 (DEAD box protein 23), also known as 100 kDa U5 snRNP-specific protein (U5 100kD) or PRP28 homolog, is a 820 amino acid member of the DEAD box helicase protein family. Localized to the nucleus, DDX23 contains one helicase ATP-binding domain and one helicase C-terminal domain. DDX23 is a component of the U5 snRNP complexes, indicating a role in pre-mRNA splicing.

REFERENCES

1. Teigelkamp, S., et al. 1997. The human U5 snRNP-specific 100-kD protein is an RS domain-containing, putative RNA helicase with significant homology to the yeast splicing factor Prp28p. RNA 3: 1313-1326.
2. Achsel, T., et al. 1998. The human U5-220kD protein (hPrp8) forms a stable RNA-free complex with several U5-specific proteins, including an RNA unwindase, a homologue of ribosomal elongation factor EF-2, and a novel WD-40 protein. Mol. Cell. Biol. 18: 6756-6766.
3. Laggerbauer, B., et al. 1998. The human U5-200kD DEXH-box protein unwinds U4/U6 RNA duplices *in vitro*. Proc. Natl. Acad. Sci. USA 95: 4188-4192.
4. Zhou, Z., et al. 2002. Comprehensive proteomic analysis of the human spliceosome. Nature 419: 182-185.
5. Jurica, M.S., et al. 2002. Purification and characterization of native spliceosomes suitable for three-dimensional structural analysis. RNA 8: 426-439.
6. Mathew, R., et al. 2008. Phosphorylation of human PRP28 by SRPK2 is required for integration of the U4/U6-U5 tri-snRNP into the spliceosome. Nat. Struct. Mol. Biol. 15: 435-443.

CHROMOSOMAL LOCATION

Genetic locus: DDX23 (human) mapping to 12q13.12; Ddx23 (mouse) mapping to 15 F1.

SOURCE

DDX23 (K-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic DDX23 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

DDX23 (K-24) is recommended for detection of DDX23 of mouse, rat, human and zebrafish origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DDX23 siRNA (h): sc-62200, DDX23 siRNA (m): sc-62201, DDX23 shRNA Plasmid (h): sc-62200-SH, DDX23 shRNA Plasmid (m): sc-62201-SH, DDX23 shRNA (h) Lentiviral Particles: sc-62200-V and DDX23 shRNA (m) Lentiviral Particles: sc-62201-V.

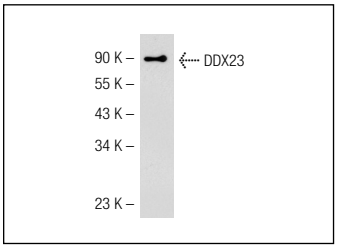
Molecular Weight of DDX23: 96 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



DDX23 (K-24): sc-133504. Western blot analysis of DDX23 expression in HeLa whole cell lysate.

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.