

# DDX21 (H-94): sc-98643

## 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. DDX21 (DEAD (Asp-Glu-Ala-Asp) box polypeptide 21), also known as GUA or GURDB, is a 783 amino acid protein that localizes to the nucleus and contains one helicase C-terminal domain and one helicase ATP-binding domain. Existing as multiple alternatively spliced isoforms, DDX21 functions as a component of the multi-protein B-WICH complex and acts as both a helicase that can unwind double-stranded RNA and as a foldase that can introduce secondary structures into single-stranded RNA. DDX21 exists as an autoantigen in people affected by watermelon stomach disease which is often characterized by chronic gastrointestinal bleeding.

## REFERENCES

- Schmid, S.R. and Linder, P. 1992. DEAD protein family of putative RNA helicases. *Mol. Microbiol.* 6: 283-291.
- Valdez, B.C., et al. 1996. A nucleolar RNA helicase recognized by autoimmune antibodies from a patient with watermelon stomach disease. *Nucleic Acids Res.* 24: 1220-1224.
- Valdez, B.C. and Wang, W. 2000. Mouse RNA helicase II/Gu: cDNA and genomic sequences, chromosomal localization, and regulation of expression. *Genomics* 66: 184-194.
- Zhu, K., et al. 2001. Human RNA helicase II/Gu gene: genomic organization and promoter analysis. *Biochem. Biophys. Res. Commun.* 281: 1006-1011.
- Valdez, B.C., et al. 2002. Genomic structure of newly identified paralogue of RNA helicase II/Gu: detection of pseudogenes and multiple alternatively spliced mRNAs. *Gene* 284: 53-61.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: DDX21 (human) mapping to 10q22.1; Ddx21 (mouse) mapping to 10 B4.

## SOURCE

DDX21 (H-94) is a rabbit polyclonal antibody raised against amino acids 684-777 mapping near the C-terminus of DDX21 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

DDX21 (H-94) is recommended for detection of DDX21 of human and, to a lesser extent, mouse and rat 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)], 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).

DDX21 (H-94) is also recommended for detection of DDX21 in additional species, including canine and bovine.

Suitable for use as control antibody for DDX21 siRNA (h): sc-90420, DDX21 siRNA (m): sc-142925, DDX21 shRNA Plasmid (h): sc-90420-SH, DDX21 shRNA Plasmid (m): sc-142925-SH, DDX21 shRNA (h) Lentiviral Particles: sc-90420-V and DDX21 shRNA (m) Lentiviral Particles: sc-142925-V.

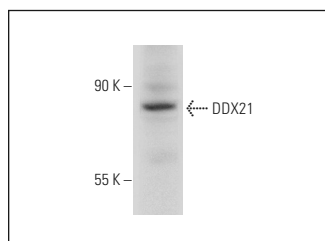
Molecular Weight of DDX21 isoforms: 87/80 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257.

## 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



DDX21 (H-94): sc-98643. Western blot analysis of DDX21 expression in RT-4 whole cell lysate.

## STORAGE

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

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Try **DDX21 (D-8): sc-376953** or **DDX21 (F-5): sc-376758**, our highly recommended monoclonal alternatives to DDX21 (H-94).