

# DDX21 (K-23): sc-133503

## 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., Henning, D., Busch, R.K., Woods, K., Flores-Rozas, H., Hurwitz, J., Perlaky, L. and Busch, H. 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., Henning, D., Valdez, B. and Busch, H. 2001. Human RNA helicase II/Gu gene: genomic organization and promoter analysis. *Biochem. Biophys. Res. Commun.* 281: 1006-1011.
- Valdez, B.C., Yang, H., Hong, E. and Sequitin, A.M. 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., Tanner, N.K., Doère, M., Linder, P. and Banroques, J. 2004. The newly discovered Q motif of DEAD-box RNA helicases regulates RNA-binding and helicase activity. *EMBO J.* 23: 2478-2487.
- Linder, P. 2006. Dead-box proteins: a family affair—active and passive players in RNP-remodeling. *Nucleic Acids Res.* 34: 4168-4180.

## CHROMOSOMAL LOCATION

Genetic locus: DDX21 (human) mapping to 10q21.3.

## SOURCE

DDX21 (K-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic DDX21 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.

## APPLICATIONS

DDX21 (K-23) is recommended for detection of DDX21 of human 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).

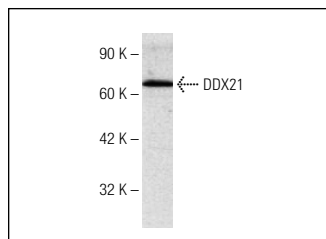
Suitable for use as control antibody for DDX21 siRNA (h): sc-90420, DDX21 shRNA Plasmid (h): sc-90420-SH and DDX21 shRNA (h) Lentiviral Particles: sc-90420-V.

Molecular Weight of DDX21 isoforms: 80-87 kDa.

## 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



DDX21 (K-23): sc-133503. Western blot analysis of DDX21 expression in Hep G2 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

**MONOS**  
Satisfaction  
Guaranteed

Try **DDX21 (D-8): sc-376953**, our highly recommended monoclonal alternative to DDX21 (K-23).