

# DDX27 (G-18): sc-87683

## BACKGROUND

DDX27 (probable ATP-dependent RNA helicase DDX27) is a 796 amino acid protein encoded by the human gene DDX27. This protein belongs to the DEAD box helicase family, DDX27/DRS1 subfamily and contains one helicase ATP-binding domain and one helicase C-terminal domain. DDX27 is a nuclear protein that likely functions as an ATP-dependent RNA helicase. RNA helicases are highly conserved enzymes that utilize the energy derived from NTP hydrolysis to modulate the structure of RNA. RNA helicases participate in all biological processes that involve RNA, including transcription, splicing and translation.

## REFERENCES

1. O'Day, C.L., Chavanikamannil, F. and Abelson, J. 1996. 18S rRNA processing requires the RNA helicase-like protein Rrp3. *Nucleic Acids Res.* 24: 3201-3207.
2. Doorbar, J., Elston, R.C., Napthine, S., Raj, K., Medcalf, E., Jackson, D., Coleman, N., Griffin, H.M., Masterson, P., Stacey, S., Mengistu, Y. and Dunlop, J. 2000. The E1E4 protein of human papillomavirus type 16 associates with a putative RNA helicase through sequences in its C-terminus. *J. Virol.* 74: 10081-10095.
3. Regard, J.B., Scheek, S., Borbiev, T., Lanahan, A.A., Schneider, A., Demetriades, A.M., Hiemisch, H., Barnes, C.A., Verin, A.D. and Worley, P.F. 2004. Verge: a novel vascular early response gene. *J. Neurosci.* 24: 4092-4103.
4. Abdelhaleem, M. 2005. RNA helicases: regulators of differentiation. *Clin. Biochem.* 38: 499-503.
5. Lee, J.H., Rho, S.B. and Chun, T. 2005. GABA<sub>A</sub> receptor-associated protein (GABARAP) induces apoptosis by interacting with DEAD (Asp-Glu-Ala-Asp/His) box polypeptide 47 (DDX 47). *Biotechnol. Lett.* 27: 623-628.
6. Nousiainen, M., Sillj , H.H., Sauer, G., Nigg, E.A. and K rner, R. 2006. Phosphoproteome analysis of the human mitotic spindle. *Proc. Natl. Acad. Sci. USA* 103: 5391-5396.
7. Sekiguchi, T., Hayano, T., Yanagida, M., Takahashi, N. and Nishimoto, T. 2006. NOP132 is required for proper nucleolus localization of DEAD-box RNA helicase DDX47. *Nucleic Acids Res.* 34: 4593-4608.

## CHROMOSOMAL LOCATION

Genetic locus: DDX27 (human) mapping to 20q13.13; Ddx27 (mouse) mapping to 2 H3.

## SOURCE

DDX27 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DDX27 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.

Blocking peptide available for competition studies, sc-87683 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DDX27 (G-18) is recommended for detection of DDX27 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.

Suitable for use as control antibody for DDX27 siRNA (h): sc-77107, DDX27 siRNA (m): sc-77412, DDX27 shRNA Plasmid (h): sc-77107-SH, DDX27 shRNA Plasmid (m): sc-77412-SH, DDX27 shRNA (h) Lentiviral Particles: sc-77107-V and DDX27 shRNA (m) Lentiviral Particles: sc-77412-V.

Molecular Weight of DDX27: 90 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


 MONOS  
Satisfaction  
Guaranteed

Try **DDX27 (2251C2a): sc-81074**, our highly recommended monoclonal alternative to DDX27 (G-18).