SANTA CRUZ BIOTECHNOLOGY, INC.

DDX27 (2251C2a): sc-81074

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The Power to Question

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., et al. 1996. 18S rRNA processing requires the RNA helicase-like protein Rrp3. Nucleic Acids Res. 24: 3201-3207.
2. Doorbar, J., et al. 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., et al. 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., et al. 2005. $GABA_A$ receptor-associated protein (GABARAP) induces apoptosis by interacting with DEAD (Asp-Glu-Ala-Asp/His) box polypeptide 47 (DDX47). Biotechnol. Lett. 27: 623-628.
6. Nousiainen, M., et al. 2006. Phosphoproteome analysis of the human mitotic spindle. Proc. Natl. Acad. Sci. USA 103: 5391-5396.
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CHROMOSOMAL LOCATION

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

SOURCE

DDX27 (2251C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the N-terminus of DDX27 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

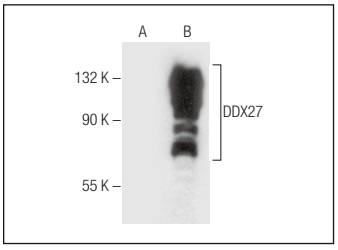
DDX27 (2251C2a) is recommended for detection of DDX27 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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.

Positive Controls: DDX27 (h): 293T Lysate: sc-372547, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

DATA



DDX27 (2251C2a): sc-81074. Western blot analysis of DDX27 expression in non-transfected: sc-117752 (**A**) and human DDX27 transfected: sc-372547 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Erkizan, H.V., et al. 2011. Novel peptide binds EWS-FLI1 and reduces the oncogenic potential in Ewing tumors. Cell Cycle 10: 3397-3408.
2. Zhou, J., et al. 2015. An integrative approach identified genes associated with drug response in gastric cancer. Carcinogenesis 36: 441-451.
3. Tsukamoto, Y., et al. 2015. Expression of DDX27 contributes to colony-forming ability of gastric cancer cells and correlates with poor prognosis in gastric cancer. Am. J. Cancer Res. 5: 2998-3014.
4. Kellner, M., et al. 2015. DEAD-box helicase DDX27 regulates 3' end formation of ribosomal 47S RNA and stably associates with the PeBoW-complex. Exp. Cell Res. 334: 146-159.
5. Bennett, A.H., et al. 2018. RNA helicase, DDX27 regulates skeletal muscle growth and regeneration by modulation of translational processes. PLoS Genet. 14: e1007226.

RESEARCH USE

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