## SANTA CRUZ BIOTECHNOLOGY, INC.

# DDX50 (2258C1a): sc-81077



#### BACKGROUND

DDX50 (Probable ATP-dependent RNA helicase DDX50, Nucleolar protein Gu2, Gu- $\beta$ ) is a 737 amino acid protein encoded by the human gene DDX50. DDX50 belongs to the DEAD-box helicase family, DDX21/DDX50 subfamily and contains one helicase ATP-binding domain and one C-terminal helicase domain. DDX50 is a functional interaction partner of c-Jun in human cells. The N-terminal transcription activation region of c-Jun interacts with a C-terminal domain of DDX50. This interaction is stimulated by anisomycin treatment in a manner that is concurrent with, but independent of, c-Jun phosphorylation. DDX50 is also believed to be a probable 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

- 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.
- Bhattacharya, R., Perumal, K., Sinha, K., Maraia, R. and Reddy, R. 2002. Methylphosphate cap structure in small RNAs reduces the affinity of RNAs to La protein. Gene Expr. 10: 243-253.
- Valdez, B.C., Perlaky, L. and Henning, D. 2002. Expression, cellular localization, and enzymatic activities of RNA helicase II/Gu-β. Exp. Cell Res. 276: 249-263.
- Westermarck, J., Weiss, C., Saffrich, R., Kast, J., Musti, A.M., Wessely, M., Ansorge, W., Séraphin, B., Wilm, M., Valdez, B.C. and Bohmann, D. 2002. The DEXD/H-box RNA helicase RHII/Gu is a cofactor for c-Junactivated transcription. EMBO J. 21: 451-460.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: DDX50 (human) mapping to 10q22.1.

## SOURCE

DDX50 (2258C1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the N-terminal region of DDX50 of human origin.

#### PRODUCT

Each vial contains 100  $\mu$ g lgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

### **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### APPLICATIONS

DDX50 (2258C1a) is recommended for detection of DDX50 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for DDX50 siRNA (h): sc-90688, DDX50 shRNA Plasmid (h): sc-90688-SH and DDX50 shRNA (h) Lentiviral Particles: sc-90688-V.

Molecular Weight of DDX50: 83 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or DDX50 (h2): 293T Lysate: sc-175076.

#### DATA



DDX50 (2258C1a): sc-81077. Western blot analysis of DDX50 expression in non-transfected: sc-117752 (**A**) and human DDX50 transfected: sc-157076 (**B**) 2931 whole cell lysates and HeLa nuclear extract (**C**).

#### **RESEARCH USE**

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

#### **PROTOCOLS**

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