SANTA CRUZ BIOTECHNOLOGY, INC.

DDX18 (D-13): sc-132249

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. DDX18 (DEAD (Asp-Glu-Ala-Asp) box polypeptide 18), also known as MrDb (Myc-regulated DEAD box protein), is a 670 amino acid protein that contains one helicase ATP-binding domain and one helicase C-terminal doman and functions as an RNA-dependent helicase that is activated by c-Myc. The gene encoding DDX18 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Schmid, S.R. and Linder, P. 1992. D-E-A-D protein family of putative RNA helicases. Mol. Microbiol. 6: 283-291.
2. Grandori, C., et al. 1996. Myc-Max heterodimers activate a DEAD box gene and interact with multiple E box-related sites *in vivo*. EMBO J. 15: 4344-4357.
3. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606355. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Abdelhaleem, M., et al. 2003. The human DDX and DHX gene families of putative RNA helicases. Genomics 81: 618-622.
5. 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.
6. Linder, P. 2006. Dead-box proteins: a family affair—active and passive players in RNP-remodeling. Nucleic Acids Res. 34: 4168-4180.
7. Dubaele, S. and Chène, P. 2007. Cellular studies of MrDb (DDX18). Oncol. Res. 16: 549-556.

CHROMOSOMAL LOCATION

Genetic locus: DDX18 (human) mapping to 2q14.1; Ddx18 (mouse) mapping to 1 E2.3.

SOURCE

DDX18 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DDX18 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-132249 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

DDX18 (D-13) is recommended for detection of DDX18 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other DDX family members.

DDX18 (D-13) is also recommended for detection of DDX18 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for DDX18 siRNA (h): sc-95038, DDX18 siRNA (m): sc-142923, DDX18 shRNA Plasmid (h): sc-95038-SH, DDX18 shRNA Plasmid (m): sc-142923-SH, DDX18 shRNA (h) Lentiviral Particles: sc-95038-V and DDX18 shRNA (m) Lentiviral Particles: sc-142923-V.

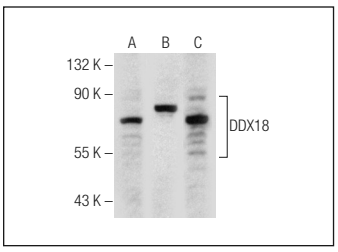
Molecular Weight of DDX18: 75 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MOLT-4 cell lysate: sc-2233 or Jurkat nuclear extract: sc-2132.

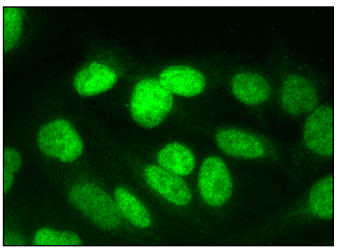
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



DDX18 (D-13): sc-132249. Western blot analysis of DDX18 expression in Jurkat (**A**) and MOLT-4 (**B**) whole cell lysates and Jurkat nuclear extract (**C**).



DDX18 (D-13): sc-132249. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization.

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 or our catalog for detailed protocols and support products.