SANTA CRUZ BIOTECHNOLOGY, INC.

DDX3X (Q-21): sc-130736

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 and spliceosome assembly. Based on their distribution patterns, some members of this family may be involved in embryogenesis, spermatogenesis, and cellular growth and division. DDX3 (DEAD box polypeptide 3) is involved in RNA metabolism. Two DDX3 paralogs are found in humans; DDX3X is encoded by a gene found on the X chromosome while DDX3Y is encoded by a gene on the Y chromosome. DDX3Y is exclusively expressed in testis and is required for normal spermatogenesis. DDX3X is ubiquitously expressed and predominantly localizes to the nuclear speckles, participating in RNA splicing, transcription, translation initiation, mRNA transport and cell cycle regulation. DDX3X also partakes in HIV-1 replication and hepatitis C viral infections.

REFERENCES

1. Chao, C.H., et al. 2006. DDX3, a DEAD box RNA helicase with tumor growth-suppressive property and transcriptional regulation activity of the p21WAF1/CIP1 promoter, is a candidate tumor suppressor. Cancer Res. 66: 6579-6588.
2. Nekhai, S. and Jeang, K.T. 2006. Transcriptional and post-transcriptional regulation of HIV-1 gene expression: role of cellular factors for Tat and Rev. Future Microbiol. 1: 417-426.
3. Rosner, A. and Rinkevich, B. 2007. The DDX3 subfamily of the DEAD box helicases: divergent roles as unveiled by studying different organisms and *in vitro* assays. Curr. Med. Chem. 14: 2517-2525.

CHROMOSOMAL LOCATION

Genetic locus: DDX3X (human) mapping to Xp11.4.

SOURCE

DDX3X (Q-21) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of DDX3X of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DDX3X (Q-21) is recommended for detection of DDX3X 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

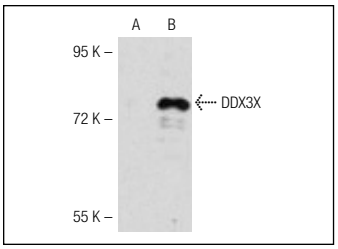
Suitable for use as control antibody for DDX3X siRNA (h): sc-77108, DDX3X shRNA Plasmid (h): sc-77108-SH and DDX3X shRNA (h) Lentiviral Particles: sc-77108-V.

Molecular Weight of DDX3X: 73 kDa.

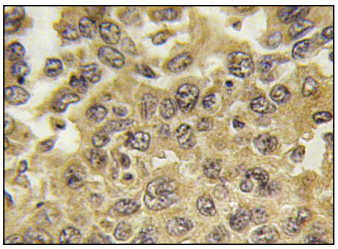
RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



DDX3X (Q-21): sc-130736. Western blot analysis of DDX3X expression in non-transfected (**A**) and human DDX3X transfected (**B**) 293 whole cell lysates.



DDX3X (Q-21): sc-130736. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic localization.

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 or our catalog for detailed protocols and support products.