

DDX3Y (B-4): sc-130421

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. Ditton, H.J., et al. 2004. The AZFa gene DBY (DDX3Y) is widely transcribed but the protein is limited to the male germ cells by translation control. *Hum. Mol. Genet.* 13: 2333-2341.
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. Chao, C.H., et al. 2006. DDX3, a DEAD box RNA helicase with tumor growth-suppressive property and transcriptional regulation activity of the p21^{WAF1/CIP1} promoter, is a candidate tumor suppressor. *Cancer Res.* 66: 6579-6588.
4. 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: DDX3Y (human) mapping to Yq11.21; Ddx3y (mouse) mapping to Y A1.

SOURCE

DDX3Y (B-4) is a mouse monoclonal antibody raised against recombinant DDX3Y of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

DDX3Y (B-4) is recommended for detection of DDX3Y 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), 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); may cross-react with DDX3X.

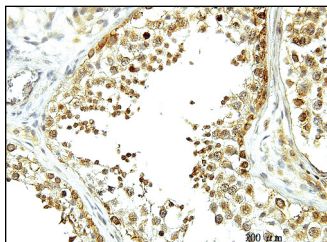
Suitable for use as control antibody for DDX3Y siRNA (h): sc-106876, DDX3Y siRNA (m): sc-142936, DDX3Y shRNA Plasmid (h): sc-106876-SH, DDX3Y shRNA Plasmid (m): sc-142936-SH, DDX3Y shRNA (h) Lentiviral Particles: sc-106876-V and DDX3Y shRNA (m) Lentiviral Particles: sc-142936-V.

Molecular Weight of DDX3Y: 73 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DDX3Y (B-4): sc-130421. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yao, C.J., et al. 2010. The role of Dby mRNA in early development of male mouse zygotes. *Asian J. Androl.* 12: 567-577.

RESEARCH USE

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