

# DDX1 (G-4): sc-271393

## 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 such as translation initiation, nuclear and mitochondrial splicing, 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. DDX1 mRNA has a widespread distribution in human fetal tissue, but is not uniformly expressed in all tissues. Chicken DDX1, which shares 93% identity with human DDX1, shows highest levels of expression during the early stages of development. Tissue maturation typically correlates with a decrease in DDX1 expression, although DDX1 levels remain elevated in late embryonic retina and brain.

## REFERENCES

1. Bleoo, S., et al. 2001. Association of human DEAD box protein DDX1 with a cleavage stimulation factor involved in 3'-end processing of pre-mRNA. *Mol. Biol. Cell* 12: 3046-3059.
2. Chen, H.C., et al. 2002. An RNA helicase, DDX1, interacting with poly(A) RNA and heterogeneous nuclear ribonucleoprotein K. *J. Biol. Chem.* 277: 40403-40409.
3. De Preter, K., et al. 2002. Quantification of MYCN, DDX1 and NAG gene copy number in neuroblastoma using a real-time quantitative PCR assay. *Mod. Pathol.* 15: 159-166.
4. Godbout, R., et al. 2002. Cloning and expression analysis of the chicken DEAD box gene DDX1. *Biochim. Biophys. Acta* 1574: 63-71.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601257. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Krishnan, V. and Zeichner, S.L. 2004. Alterations in the expression of DEAD-box and other RNA binding proteins during HIV-1 replication. *Retrovirology* 1: 42.

## CHROMOSOMAL LOCATION

Genetic locus: DDX1 (human) mapping to 2p24.3; Ddx1 (mouse) mapping to 12 A1.1.

## SOURCE

DDX1 (G-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of DDX1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271393 X, 200 µg/0.1 ml.

## STORAGE

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

## APPLICATIONS

DDX1 (G-4) is recommended for detection of DDX1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for DDX1 siRNA (h): sc-60517, DDX1 siRNA (m): sc-60518, DDX1 shRNA Plasmid (h): sc-60517-SH, DDX1 shRNA Plasmid (m): sc-60518-SH, DDX1 shRNA (h) Lentiviral Particles: sc-60517-V and DDX1 shRNA (m) Lentiviral Particles: sc-60518-V.

DDX1 (G-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

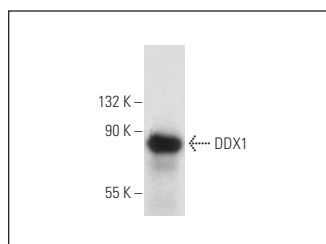
Molecular Weight of DDX1: 82 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Y79 cell lysate: sc-2240 or IMR-32 nuclear extract: sc-2148.

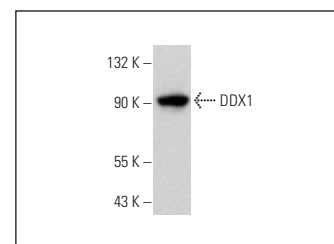
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



DDX1 (G-4): sc-271393. Western blot analysis of DDX1 expression in HeLa nuclear extract.



DDX1 (G-4): sc-271393. Western blot analysis of DDX1 expression in IMR-32 nuclear extract.

## SELECT PRODUCT CITATIONS

1. Palrasu, M., et al. 2019. A novel probe for spliceosomal proteins that induces autophagy and death of melanoma cells reveals new targets for melanoma drug discovery. *Cell. Physiol. Biochem.* 53: 656-686.

## RESEARCH USE

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