SANTA CRUZ BIOTECHNOLOGY, INC.

DDX1 (A-7): sc-271438

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

DDX1 (A-7) 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_{2a} 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-271438 X, 200 µg/0.1 ml.

DDX1 (A-7) is available conjugated to agarose (sc-271438 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271438 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271438 PE), fluorescein (sc-271438 FITC), Alexa Fluor® 488 (sc-271438 AF488), Alexa Fluor® 546 (sc-271438 AF546), Alexa Fluor® 594 (sc-271438 AF594) or Alexa Fluor® 647 (sc-271438 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271438 AF680) or Alexa Fluor® 790 (sc-271438 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

DDX1 (A-7) 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 (A-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

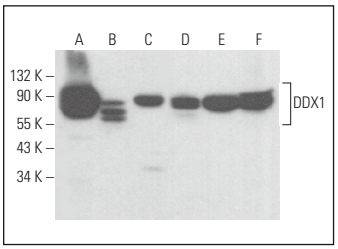
Molecular Weight of DDX1: 82 kDa.

Positive Controls: IMR-32 nuclear extract: sc-2148.

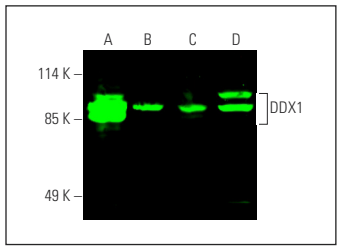
RECOMMENDED SUPPORT REAGENTS

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™ Molecular Weight Standards: sc-2035, UltraCruz® 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DDX1 (A-7): sc-271438. Western blot analysis of DDX1 expression in IMR-32 nuclear extract (**A**) and H4 (**B**), EOC 20 (**C**), T98G (**D**), A2058 (**E**) and C6 (**F**) whole cell lysates.



DDX1 (A-7): sc-271438. Near-Infrared western blot analysis of DDX1 expression in IMR-32 nuclear extract (**A**) and T98G (**B**), A2058 (**C**) and C6 (**D**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Kim, S., et al. 2020. ATAD5 restricts R-loop formation through PCNA unloading and RNA helicase maintenance at the replication fork. Nucleic Acids Res. 48: 7218-7238.
2. Asberger, J., et al. 2020. Endoxifen and fulvestrant regulate estrogen receptor α and related DEAD-box proteins. Endocr. Connect. 9: 1156-1167.
3. Pallett, M.A., et al. 2022. DDX50 is a viral restriction factor that enhances IRF3 activation. Viruses 14: 316.
4. Lin, W.L., et al. 2022. DDX18 prevents R-loop-induced DNA damage and genome instability via PARP-1. Cell Rep. 40: 111089.
5. Du, J., et al. 2023. PTRF-IL33-ZBP1 signaling mediating macrophage necroptosis contributes to HDM-induced airway inflammation. Cell Death Dis. 14: 432.

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.