SANTA CRUZ BIOTECHNOLOGY, INC.

# DDX54 (FF5): sc-101021

## 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. DDX54 (DEAD polypeptide 54), also known as DP97, is an 881 amino acid protein that contains two bipartite nuclear localization signals, three nuclear receptor boxes (LXXLL motifs), a potential CoRNR box, and several stretches of glutamate and lysine residues. DDX54 is ubiquitously expressed, with highest expression in pancreas and lung. DDX54 co-localizes with ER$\alpha$ to structures in the nucleoplasm. DDX54 represses ER$\alpha$ transcriptional activity and acts as a nuclear receptor co-repressor against ER$\beta$, progesterone, glucocorticoid and RAR$\alpha$.

## REFERENCES


1. Py, B., Higgins, C.F., Krisch, H.M. and Carpousis, A.J. 1996. A DEAD-box RNA helicase in the *Escherichia coli* RNA degradosome. Nature 381: 169-172.
2. Imamura, O., Sugawara, M. and Furuichi, Y. 1997. Cloning and characterization of a putative human RNA helicase gene of the DEAH-box protein family. Biochem. Biophys. Res. Commun. 240: 335-340.
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8. Theissen, B., Karow, A.R., Köhler, J., Gubaev, A. and Klostermeier, D. 2008. Cooperative binding of ATP and RNA induces a closed conformation in a DEAD box RNA helicase. Proc. Natl. Acad. Sci. USA 105: 548-553.


## CHROMOSOMAL LOCATION

Genetic locus: DDX54 (human) mapping to 12q24.13.

## STORAGE

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

## SOURCE

DDX54 (FF5) is a mouse monoclonal antibody raised against recombinant DDX54 of human origin.

## PRODUCT

Each vial contains 50 µg $IgG_{2a}$ in 500 µl PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

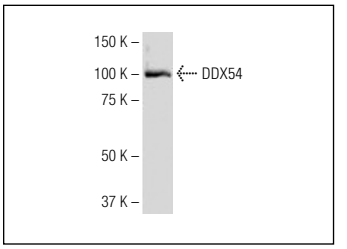
DDX54 (FF5) is recommended for detection of DDX54 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (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 DDX54 siRNA (h): sc-96216, DDX54 shRNA Plasmid (h): sc-96216-SH and DDX54 shRNA (h) Lentiviral Particles: sc-96216-V.

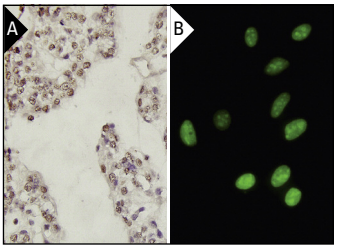
Molecular Weight of DDX54: 99 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## DATA




DDX54 (FF5): sc-101021. Western blot analysis of DDX54 expression in HeLa whole cell lysate.




DDX54 (FF5): sc-101021. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human ovary, clear cell carcinoma tissue (**A**) and immunofluorescence staining of paraformaldehyde-fixed HeLa cells (**B**) showing nuclear localization.

## 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.