

# DDX36 (E-4): sc-398418

## 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. Specifically, DEAD box proteins are involved in translation initiation, nuclear and mitochondrial splicing, and ribosome and spliceosome assembly. Based on their distribution patterns, members of this family may be involved in embryogenesis, spermatogenesis, and cellular growth and division. DDX30, DDX35 and DDX36 each contain one helicase ATP-binding domain and one helicase C-terminal domain. DDX36 (DEAH box protein 36), also known as MLE-like protein 1 and RNA helicase associated with AU-rich element ARE, is a 1,008 amino acid protein that is expressed in testis and may function in sex development and spermatogenesis. DDX36 plays a role in degradation and deadenylation of mRNAs that contain the consensus ARE sequence element in their 3'-UTR. There are three isoforms of DDX36 that exist as a result of alternative splicing events.

## REFERENCES

1. Fu, J.J., et al. 2002. Molecular cloning and characterization of human DDX36 and mouse Ddx36 genes, new members of the DEAD/H box superfamily. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 34: 655-661.
2. Fu, J.J., et al. 2003. Expression research for human DDX36 and mouse Ddx36 gene in the adult testis. *Yi Chuan Xue Bao* 30: 201-208.
3. Abdelhaleem, M. 2005. RNA helicases: regulators of differentiation. *Clin. Biochem.* 38: 499-503.
4. Cordin, O., et al. 2006. The DEAD-box protein family of RNA helicases. *Gene* 367: 17-37.
5. Wang, Y. and Bogenhagen, D.F. 2006. Human mitochondrial DNA nucleoids are linked to protein folding machinery and metabolic enzymes at the mitochondrial inner membrane. *J. Biol. Chem.* 281: 25791-25802.
6. Linder, P. 2006. Dead-box proteins: a family affair—active and passive players in RNP-remodeling. *Nucleic Acids Res.* 34: 4168-4180.
7. Fuller-Pace, F.V. and Ali, S. 2008. The DEAD box RNA helicases p68 (Ddx5) and p72 (Ddx17): novel transcriptional co-regulators. *Biochem. Soc. Trans.* 36: 609-612.
8. Cantin, G.T., et al. 2008. Combining protein-based IMAC, peptide-based IMAC, and MudPIT for efficient phosphoproteomic analysis. *J. Proteome Res.* 7: 1346-1351.

## CHROMOSOMAL LOCATION

Genetic locus: DHX36 (human) mapping to 3q25.2.

## SOURCE

DDX36 (E-4) is a mouse monoclonal antibody raised against amino acids 368-491 mapping within an internal region of DDX36 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.

## APPLICATIONS

DDX36 (E-4) is recommended for detection of DDX36 of 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 DDX36 siRNA (h): sc-78053, DDX36 shRNA Plasmid (h): sc-78053-SH and DDX36 shRNA (h) Lentiviral Particles: sc-78053-V.

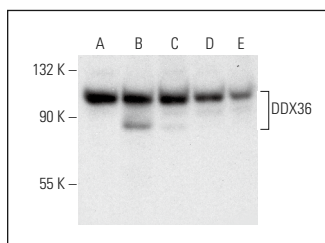
Molecular Weight of DDX36: 115 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Ramos cell lysate: sc-2216 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

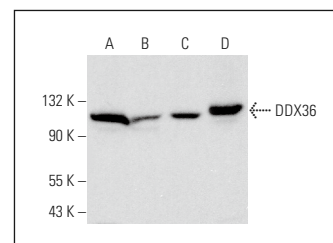
## RECOMMENDED SUPPORT REAGENTS

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



DDX36 (E-4): sc-398418. Western blot analysis of DDX36 expression in Raji (A), NTERA-2 cl.D1 (B), Ramos (C), K-562 (D) and BJAB (E) whole cell lysates.



DDX36 (E-4): sc-398418. Western blot analysis of DDX36 expression in Raji (A), MEG-01 (B), Hep G2 (C) and U-698-M (D) whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.