SANTA CRUZ BIOTECHNOLOGY, INC.

DDX11 (F-10): sc-515168

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 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. DDX11 (DEAD/H box protein 11), also known as CHLR1 or KRG2, is a member of the DEAD-box protein family and possesses both ATPase and DNA helicase activity. A homolog of the *S. cerevisiae* CHL1 protein, DDX11 is localized to the nucleus and is highly expressed in the testis, thymus, ovary, spleen and pancreas. DDX11 can bind to both single- and double-stranded DNA and is essential for proper chromosome segregation and embryonic development. Five isoforms of DDX11 exist due to alternative splicing events.

REFERENCES

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3. Amann, J., et al. 1997. Characterization of putative human homologues of the yeast chromosome transmission fidelity gene, CHL1. J. Biol. Chem. 272: 3823-3832.
4. Hirota, Y., et al. 2000. Characterization of the enzymatic activity of hChlR1, a novel human DNA helicase. Nucleic Acids Res. 28: 917-924.
5. Genini, S., et al. 2006. Radiation hybrid mapping of 18 positional and physiological candidate genes for arthrogryposis multiplex congenita on porcine chromosome 5. Anim. Genet. 37: 239-244.
6. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.
7. Parish, J.L., et al. 2006. The DNA helicase ChlR1 is required for sister chromatid cohesion in mammalian cells. J. Cell Sci. 119: 4857-4865.
8. Parish, J.L., et al. 2006. ChlR1 is required for loading papillomavirus E2 onto mitotic chromosomes and viral genome maintenance. Mol. Cell 24: 867-876.
9. Inoue, A., et al. 2007. Loss of ChlR1 helicase in mouse causes lethality due to the accumulation of aneuploid cells generated by cohesion defects and placental malformation. Cell Cycle 6: 1646-1654.

CHROMOSOMAL LOCATION

Genetic locus: DDX11 (human) mapping to 12p11.21, DDX12P (human) mapping to 12p13.31; Ddx11 (mouse) mapping to 17 E1.1.

SOURCE

DDX11 (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 71-92 near the N-terminus of DDX11 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515168 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

DDX11 (F-10) is recommended for detection of DDX11 and DDX12 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).

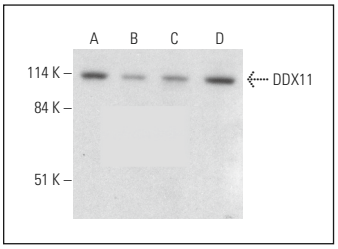
Molecular Weight of DDX11: 112 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NTERA-2 cl.D1 whole cell lysate: sc-364181 or K-562 whole cell lysate: sc-2203.

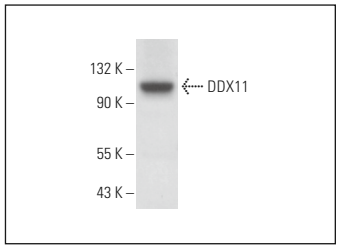
RECOMMENDED SUPPORT REAGENTS

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



DDX11 (F-10): sc-515168. Western blot analysis of DDX11 expression in HeLa (**A**), ES-2 (**B**), NTERA-2 cl.D1 (**C**) and K-562 (**D**) whole cell lysates.



DDX11 (F-10): sc-515168. Western blot analysis of DDX11 expression in SUP-T1 whole cell lysate.

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.