SANTA CRUZ BIOTECHNOLOGY, INC.

DDX11 (h2): 293T Lysate: sc-116180

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

1. Frank, S. and Werner, S. 1996. The human homologue of the yeast CHL1 gene is a novel keratinocyte growth factor-regulated gene. J. Biol. Chem. 271: 24337-24340.
2. Amann, J., Valentine, M., Kidd, V.J. and Lahti, J.M. 1997. Localization of chi1-related helicase genes to human chromosome regions 12p11 and 12p13: similarity between parts of these genes and conserved human telomeric-associated DNA. Genomics 32: 260-265.
3. Amann, J., Kidd, V.J. and Lahti, J.M. 1997. Characterization of putative human homologues of the yeast chromosome transmission fidelity gene, CHL1. J. Biol. Chem. 272: 3823-3832.
4. Hirota, Y. and Lahti, J.M. 2000. Characterization of the enzymatic activity of hChlR1, a novel human DNA helicase. Nucleic Acids Res. 28: 917-924.
5. Genini, S., Nguyen, T.T., Malek, M., Talbot, R., Gebert, S., Rohrer, G., Nonneman, D., Stranzinger, G. and Vögeli, P. 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., Jones, S., Wood, L.D., Parsons, D.W., Lin, J., Barber, T.D., Mandelker, D., Leary, R.J., Ptak, J., Silliman, N., Szabo, S., Buckhaults, P., Farrell, C., Meeh, P., Markowitz, S.D., Willis, J., Dawson, D., Willson, J.K., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.
7. Parish, J.L., Rosa, J., Wang, X., Lahti, J.M., Doxsey, S.J. and Androphy, E.J. 2006. The DNA helicase ChlR1 is required for sister chromatid cohesion in mammalian cells. J. Cell Sci. 119: 4857-4865.
8. Parish, J.L., Bean, A.M., Park, R.B. and Androphy, E.J. 2006. ChlR1 is required for loading papillomavirus E2 onto mitotic chromosomes and viral genome maintenance. Mol. Cell 24: 867-876.
9. Inoue, A., Li, T., Roby, S.K., Valentine, M.B., Inoue, M., Boyd, K., Kidd, V.J. and Lahti, J.M. 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.

PRODUCT

DDX11 (h2): 293T Lysate represents a lysate of human DDX11 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

DDX11 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive DDX11 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.