SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-8 (h): 293 Lysate: sc-114760

BACKGROUND

E2F-8 is an 867 amino acid nuclear protein that contains two DNA-binding domains and belongs to a large family of transcription factors that includes E2F-1, E2F-2, E2F-3, E2F-4, E2F-5, E2F-6 and E2F-7. Existing as a homodimer or as a heterodimer with E2F-7, E2F-8 functions to bind DNA at the E2 recognition site, 5'-TTTC[CG]CGC-3', thereby inhibiting E2F-dependent transcription and regulating the expression of genes that are required for cell cycle progression. The gene encoding E2F-8 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

1. Di Stefano, L., Jensen, M.R. and Helin, K. 2003. E2F-7, a novel E2F featuring DP-independent repression of a subset of E2F-regulated genes. EMBO J. 22: 6289-6298.
2. Maiti, B., Li, J., de Bruin, A., Gordon, F., Timmers, C., Opavsky, R., Patil, K., Tuttle, J., Cleghorn, W. and Leone, G. 2005. Cloning and characterization of mouse E2F-8, a novel mammalian E2F family member capable of blocking cellular proliferation. J. Biol. Chem. 280: 18211-18220.
3. Christensen, J., Cloos, P., Toftegaard, U., Klinkenberg, D., Bracken, A.P., Trinh, E., Heeran, M., Di Stefano, L. and Helin, K. 2005. Characterization of E2F-8, a novel E2F-like cell-cycle regulated repressor of E2F-activated transcription. Nucleic Acids Res. 33: 5458-5470.
4. Logan, N., Graham, A., Zhao, X., Fisher, R., Maiti, B., Leone, G. and La Thangue, N.B. 2005. E2F-8: an E2F family member with a similar organization of DNA-binding domains to E2F-7. Oncogene 24: 5000-5004.
5. Li, J., Ran, C., Li, E., Gordon, F., Comstock, G., Siddiqui, H., Cleghorn, W., Chen, H.Z., Kornacker, K., Liu, C.G., Pandit, S.K., Khanizadeh, M., Weinstein, M., Leone, G. and de Bruin, A. 2008. Synergistic function of E2F-7 and E2F-8 is essential for cell survival and embryonic development. Dev. Cell 14: 62-75.
6. Zalmas, L.P., Zhao, X., Graham, A.L., Fisher, R., Reilly, C., Coutts, A.S. and La Thangue, N.B. 2008. DNA-damage response control of E2F-7 and E2F-8. EMBO Rep. 9: 252-259.
7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612047. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: E2F8 (human) mapping to 11p15.1.

PRODUCT

E2F-8 (h): 293 Lysate represents a lysate of human E2F-8 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

E2F-8 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive E2F-8 antibodies. Recommended use: 10-20 µl per lane.

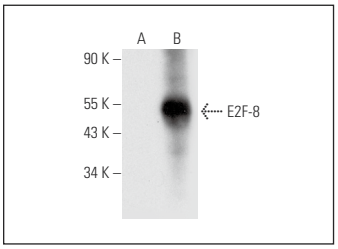
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

E2F-8 (B-9): sc-514064 is recommended as a positive control antibody for Western Blot analysis of enhanced human E2F-8 expression in E2F-8 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

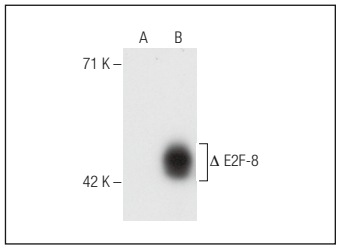
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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.

DATA



E2F-8 (B-9): sc-514064. Western blot analysis of E2F-8 expression in non-transfected: sc-110760 (**A**) and human E2F-8 transfected: sc-114760 (**B**) 293 whole cell lysates.



E2F-8 (9): sc-130313. Western blot analysis of E2F-8 expression in non-transfected: sc-110760 (**A**) and truncated human E2F-8 transfected: sc-114760 (**B**) 293 whole cell lysates.

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.