

E2F-1 (m): 293T Lysate: sc-126755

BACKGROUND

The human retinoblastoma gene product plays an important role in the negative regulation of cell proliferation. Functional inactivation of Rb can be mediated either through mutation or as a consequence of interaction with DNA tumor virus encoded proteins. Of all the Rb associations described to date, the identification of a complex between Rb and the transcription factor E2F most directly implicates Rb in regulation of cell proliferation. E2F was originally identified through its role in transcriptional activation of the Adenovirus E2 promoter. Sequences that are homologous to the E2F binding site exist upstream of a number of genes that encode proteins with putative functions in the G₁/S phases of the cell cycle. E2F-1 is a member of a broader family of transcription regulators including E2F-2, E2F-3, E2F-4, E2F-5 and E2F-6, each of which forms heterodimers with a second protein, DP-1, forming an "active" E2F transcriptional regulatory complex.

REFERENCES

1. Chellappan, S., Hiebert, S., Mudryj, M., Horowitz, J.M. and Nevins, J.R. 1991. The E2F transcription factor is a cellular target for the Rb protein. *Cell* 65: 1053-1061.
2. Chittenden, T., Livingston, D.M. and Kaelin, W.G. Jr. 1991. The T/E1A-binding domain of the retinoblastoma product can interact selectively with a sequence-specific DNA-binding protein. *Cell* 65: 1073-1082.
3. Helin, K., Lees, J.A., Vidal, M., Dyson, N., Harlow, E. and Fattaey, A. 1992. A cDNA encoding a pRb-binding protein with properties of the transcription factor E2F. *Cell* 70: 337-350.
4. Helin, K., Wu, C., Fattaey, A.R., Lees, J.A., Dynlacht, B.D., Ngwu, C. and Harlow, E. 1993. Heterodimerization of the transcription factors E2F-1 and DP-1 leads to cooperative transactivation. *Genes Dev.* 7: 1850-1861.
5. Krek, W., Livingston, D.M. and Shirodkar, S. 1993. Binding to DNA and the retinoblastoma gene product promoted by complex formation of different E2F family members. *Science* 262: 1557-1560.
6. Ginsberg, D., Vairo, G., Chittenden, T., Xiao, Z.X., Xu, G., Wydner, K.L., DeCaprio, J.A., Lawrence, J.B. and Livingston, D.M. 1994. E2F-4, a new member of the E2F transcription factor family, interacts with p107. *Genes Dev.* 8: 2665-2679.
7. Beijersbergen, R.L., Kerkhoven, R.M., Zhu, L., Carlee, L., Voorhoeve, P.M. and Bernards, R. 1994. E2F-4, a new member of the E2F gene family, has oncogenic activity and associates with p107 *in vivo*. *Genes Dev.* 8: 2680-2690.
8. Trimarchi, J.M., Fairchild, B., Verona, R., Moberg, K., Andon, N. and Lees, J.A. 1998. E2F-6, a member of the E2F family that can behave as a transcriptional repressor. *Proc. Natl. Acad. Sci. USA* 95: 2850-2855.
9. Hao, H., Dong, Y., Bowling, M.T., Gomez-Gutierrez, J.G., Zhou, H.S. and McMasters, K.M. 2007. E2F-1 induces melanoma cell apoptosis via PUMA up-regulation and Bax translocation. *BMC Cancer* 7: 24.

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.

CHROMOSOMAL LOCATION

Genetic locus: E2f1 (mouse) mapping to 2 H1.

PRODUCT

E2F-1 (m): 293T Lysate represents a lysate of mouse E2F-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

E2F-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive E2F-1 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.

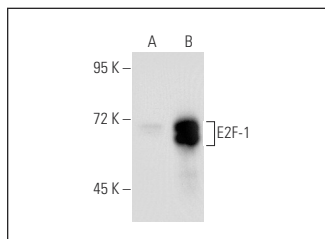
E2F-1 (KH129): sc-56661 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse E2F-1 expression in E2F-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-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.

DATA



E2F-1 (KH129): sc-56661. Western blot analysis of E2F-1 expression in non-transfected: sc-117752 (A) and mouse E2F-1 transfected: sc-126755 (B) 293T 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.