# E2F-5 (89-200): sc-4121 WB



The Power to Question

## **BACKGROUND**

The human retinoblastoma gene product appears to play 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 homologous to the E2F binding site have been found upstream of a number of genes that encode proteins with putative functions in the G1 and S phases of the cell cycle. E2F-1 is a member of a broader family of transcriptional 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**

- Chittenden, T., Livingston, D.M., and Kaelin, W.G. Jr. 1991. The T/E1Abinding domain of the retinoblastoma product can interact selectively with a sequence-specific DNA-binding protein. Cell 65: 1073-1082.
- 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.
- 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.
- 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 trans-activation. Genes Dev. 7: 1850-1861.
- 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.
- 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.
- Beijersbergen, R.L., Kerkhoven, R.M., Zhu, L., Carlée, 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.

## **SOURCE**

E2F-5 (89-200) is expressed in *E. coli* as a 45 kDa tagged fusion protein corresponding to amino acids 89-200 of E2F-5 of human origin.

#### **STORAGE**

Store at -20° C; stable for one year from the date of shipment.

#### **PRODUCT**

E2F-5 (89-200) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10  $\mu$ g in 0.1 ml SDS-PAGE loading buffer.

## **APPLICATIONS**

E2F-5 (89-200) is suitable as a Western blotting control for sc-968 and sc-1699.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

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