

E2F-4 (C-20): sc-866

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 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.

CHROMOSOMAL LOCATION

Genetic locus: E2F4 (human) mapping to 16q22.1, E2F5 (human) mapping to 8q21.2; E2f4 (mouse) mapping to 8 D3, E2f5 (mouse) mapping to 3 A1.

SOURCE

E2F-4 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of E2F-4 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-866 X, 200 µg/0.1 ml.

E2F-4 (C-20) is available conjugated to agarose (sc-866 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-866 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

E2F-4 (C-20) is recommended for detection of E2F-4 and, to a lesser extent, E2F-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

E2F-4 (C-20) is also recommended for detection of E2F-4 and, to a lesser extent, E2F-5 in additional species, including equine, canine, bovine, porcine and avian.

E2F-4 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of E2F-4: 60 kDa.

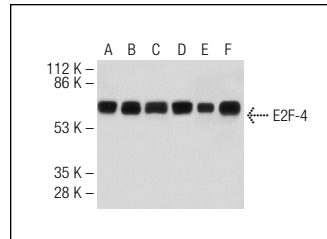
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

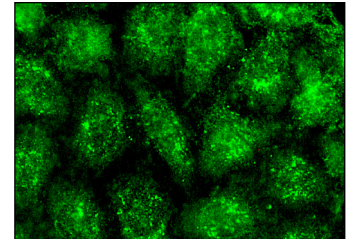
RESEARCH USE

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

DATA



E2F-4 (C-20): sc-866. Western blot analysis of E2F-4 expression in MM-142 (A), 3611-RF (B), HeLa (C), A-431 (D), Y79 (E) and A-673 (F) nuclear extracts.



E2F-4 (C-20): sc-866. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Wang, D., et al. 2000. E2F-4 and E2F-1 have similar proliferative properties but different apoptotic and oncogenic properties *in vivo*. *Mol. Cell. Biol.* 20: 3417-3424.
- Gill, R.M. and Hamel, P.A. 2000. Subcellular compartmentalization of E2F family members is required for maintenance of the postmitotic state in terminally differentiated muscle. *J. Cell Biol.* 148: 1187-1201.
- Liu, W., et al. 2010. PHF8 mediates histone H4 lysine 20 demethylation events involved in cell cycle progression. *Nature* 466: 508-512.
- Calo, E., et al. 2010. Rb regulates fate choice and lineage commitment *in vivo*. *Nature* 466: 1110-1114.
- Martinez, L.A., et al. 2010. E2F3 is a mediator of DNA damage-induced apoptosis. *Mol. Cell. Biol.* 30: 524-536.
- Zhang, K., et al. 2010. Activation of Cdc6 by MyoD is associated with the expansion of quiescent myogenic satellite cells. *J. Cell Biol.* 188: 39-48.
- Sha, J., et al. 2010. E1A interacts with two opposing transcriptional pathways to induce quiescent cells into S phase. *J. Virol.* 84: 4050-4059.
- Böhlig, L., et al. 2011. p53 activates the PANK1/miRNA-107 gene leading to downregulation of CDK6 and p130 cell cycle proteins. *Nucleic Acids Res.* 39: 440-453.
- van der Gun, B.T., et al. 2011. Transcription factors and molecular epigenetic marks underlying EpCAM overexpression in ovarian cancer. *Br. J. Cancer* 105: 312-319.
- Hazar-Rethinam, M., et al. 2011. Loss of E2F7 expression is an early event in squamous differentiation and causes derepression of the key differentiation activator Sp1. *J. Invest. Dermatol.* 131: 1077-1084.


 MONOS
Satisfation
Guaranteed

Try **E2F-4 (D-7): sc-398543** or **E2F-4 (WUF10): sc-69686**, our highly recommended monoclonal alternatives to E2F-4 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **E2F-4 (D-7): sc-398543**.