

# E2F-3 (C-18): sc-878

## 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 G<sub>1</sub> 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: E2F3 (human) mapping to 6p22.3; E2f3 (mouse) mapping to 13 A3.2.

## SOURCE

E2F-3 (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of E2F-3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-878 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-878 X, 200 µg/0.1 ml.

## APPLICATIONS

E2F-3 (C-18) is recommended for detection of E2F-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

E2F-3 (C-18) is also recommended for detection of E2F-3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for E2F-3 siRNA (h): sc-37817, E2F-3 siRNA (m): sc-37818, E2F-3 shRNA Plasmid (h): sc-37817-SH, E2F-3 shRNA Plasmid (m): sc-37818-SH, E2F-3 shRNA (h) Lentiviral Particles: sc-37817-V and E2F-3 shRNA (m) Lentiviral Particles: sc-37818-V.

E2F-3 (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

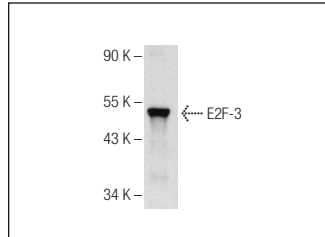
Molecular Weight of E2F-3: 45 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 nuclear extract: sc-2138 or K-562 nuclear extract: sc-2130.

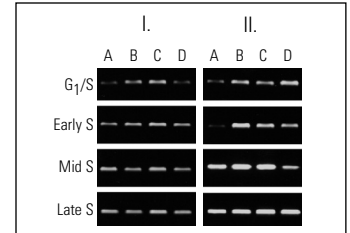
## STORAGE

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

## DATA



E2F-3 (C-18): sc-878. Western blot analysis of E2F-3 expression in KNRK whole cell lysate.



ChIP analysis of E2F transcription factor binding to the oriP (I.) and c-Myc (II.) promoters in Raji cells as a function of the cell cycle. Antibodies tested include E2F-1 (C-20): sc-193 (A), E2F-2 (C-20): sc-633 (B), E2F-3 (C-18): sc-878, E2F-3 (N-20): sc-879 (C) and E2F-4 (C-20): sc-866 (D). Data kindly provided by Dr. J. H. J. Petrini and reproduced from Master, et al., Mol. Cell. Biol. 2001, 21: 6006-6016.

## SELECT PRODUCT CITATIONS

- Chen, W.D., et al. 1997. Apoptosis is associated with cleavage of a 5 kDa fragment from Rb which mimics dephosphorylation and modulates E2F binding. *Oncogene* 14: 1243-1248.
- Wirt, S.E., et al. 2010. G<sub>1</sub> arrest and differentiation can occur independently of Rb family function. *J. Cell Biol.* 191: 809-825.
- Sha, J., et al. 2010. E1A interacts with two opposing transcriptional pathways to induce quiescent cells into S phase. *J. Virol.* 84: 4050-4059.
- Zeng, Y., et al. 2011. p53 binds to and is required for the repression of Arf tumor suppressor by HDAC and polycomb. *Cancer Res.* 71: 2781-2792.
- Andrusiak, M.G., et al. 2011. Rb/E2F regulates expression of neogenin during neuronal migration. *Mol. Cell. Biol.* 31: 238-247.
- Moiseeva, O., et al. 2011. Retinoblastoma-independent regulation of cell proliferation and senescence by the p53-p21 axis in lamin A/C-depleted cells. *Aging Cell* 10: 789-797.
- Bashari, D., et al. 2011. JNK activation is regulated by E2F and promotes E2F1-induced apoptosis. *Cell. Signal.* 23: 65-70.
- Libertini, S.J., et al. 2012. The interleukin 6 receptor is a direct transcriptional target of E2F3 in prostate tumor derived cells. *Prostate* 72: 649-660.

## RESEARCH USE

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



Try **E2F-3 (PG30): sc-56665** or **E2F-3 (D-2): sc-28308**, our highly recommended monoclonal alternatives to E2F-3 (C-18).