

# p-E2F-1 (Ser 337): sc-130188

## 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 G<sub>1</sub>/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

- Chellappan, S., et al. 1991. The E2F transcription factor is a cellular target for the Rb protein. *Cell* 65: 1053-1061.
- Chittenden, T., et al. 1991. The T/E1A-binding domain of the retinoblastoma product can interact selectively with a sequence-specific DNA-binding protein. *Cell* 65: 1073-1082.
- Helin, K., et al. 1992. A cDNA encoding a pRb-binding protein with properties of the transcription factor E2F. *Cell* 70: 337-350.
- Helin, K., et al. 1993. Heterodimerization of the transcription factors E2F-1 and DP-1 leads to cooperative transactivation. *Genes Dev.* 7: 1850-1861.
- Krek, W., et al. 1993. Binding to DNA and the retinoblastoma gene product promoted by complex formation of different E2F family members. *Science* 262: 1557-1560.
- Ginsberg, D., et al. 1994. E2F-4, a new member of the E2F transcription factor family, interacts with p107. *Genes Dev.* 8: 2665-2679.
- Beijersbergen, R.L., et al. 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.
- Trimarchi, J.M., et al. 1998. E2F-6, a member of the E2F family that can behave as a transcriptional repressor. *Proc. Natl. Acad. Sci. USA* 95: 2850-2855.

## CHROMOSOMAL LOCATION

Genetic locus: E2F1 (human) mapping to 20q11.22.

## STORAGE

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

## SOURCE

p-E2F-1 (Ser 337) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 337 of E2F-1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

p-E2F-1 (Ser 337) is recommended for detection of Ser 337 phosphorylated E2F-1 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for E2F-1 siRNA (h): sc-29297, E2F-1 siRNA (h2): sc-44258, E2F-1 shRNA Plasmid (h): sc-29297-SH, E2F-1 shRNA Plasmid (h2): sc-44258-SH, E2F-1 shRNA (h) Lentiviral Particles: sc-29297-V and E2F-1 shRNA (h2) Lentiviral Particles: sc-44258-V.

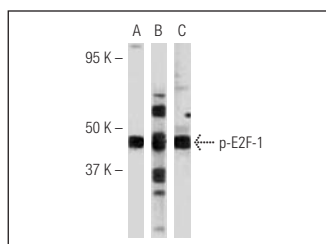
Molecular Weight of E2F-1: 60 kDa.

Positive Controls: T47D whole cell lysate, Hep G2 cell lysate: sc-2227 or A2058 whole cell lysate.

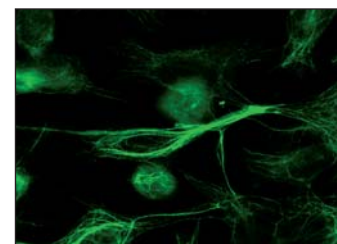
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p-E2F-1 (Ser 337): sc-130188. Western blot analysis of p-E2F-1 expression in T47D (A), Hep G2 (B), and A2058 (C) whole cell lysates.



p-E2F-1 (Ser 337): sc-130188. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization.

## RESEARCH USE

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