SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-1 (H-137): sc-22820

SANTA CRUZ BIOTECHNOLOGY

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 G_1 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.

CHROMOSOMAL LOCATION

Genetic locus: E2F1 (human) mapping to 20q11.22; E2f1 (mouse) mapping to 2 H1.

SOURCE

E2F-1 (H-137) is a rabbit polyclonal antibody raised against amino acids 301-437 mapping at the C-terminus of E2F-1 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.

Available as agarose conjugate for immunoprecipitation, sc-22820 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-22820 X, 200 µg/0.1 ml.

APPLICATIONS

E2F-1 (H-137) is recommended for detection of E2F-1 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), 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).

E2F-1 (H-137) is also recommended for detection of E2F-1 in additional species, including bovine and porcine.

Suitable for use as control antibody for E2F-1 siRNA (h): sc-29297, E2F-1 siRNA (m): sc-35247, E2F-1 shRNA Plasmid (h): sc-29297-SH, E2F-1 shRNA Plasmid (m): sc-35247-SH, E2F-1 shRNA (h) Lentiviral Particles: sc-29297-V and E2F-1 shRNA (m) Lentiviral Particles: sc-35247-V.

E2F-1 (H-137) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

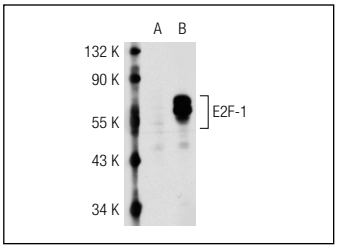
Molecular Weight of E2F-1: 60 kDa.

Positive Controls: E2F-1 (h): 293T Lysate: sc-116659.

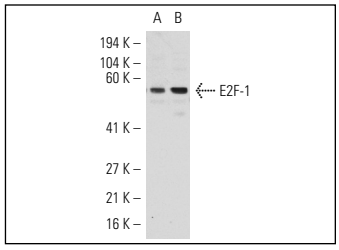
STORAGE

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

DATA



E2F-1 (H-137): sc-22820. Western blot analysis of E2F-1 expression in non-transfected: sc-117752 (**A**) and human E2F-1 transfected: sc-116659 (**B**) 293T whole cell lysates.



E2F-1 (H-137): sc-22820. Western blot analysis of E2F-1 expression in WEHI-231 (**A**) and MM-142 (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Ebelt, H., et al. 2005. Divergent siblings: E2F-2 and E2F-4 but not E2F-1 and E2F-3 induce DNA synthesis in cardiomyocytes without activation of apoptosis. Circ. Res. 96: 509-517.
2. Li, Y., et al. 2009. Genistein depletes telomerase activity through cross-talk between genetic and epigenetic mechanisms. Int. J. Cancer 125: 286-296.
3. Liu, W., et al. 2010. PHF8 mediates histone H4 lysine 20 demethylation events involved in cell cycle progression. Nature 466: 508-512.
4. Wei, Y., et al. 2010. Regulation of the β1,4-Galactosyltransferase I promoter by E2F1. J. Biochem. 148: 263-271.
5. Almeida, M.Q., et al. 2010. Mouse Prkar1a haploinsufficiency leads to an increase in tumors in the Trp53$^{+/-}$ or Rb1$^{+/-}$ backgrounds and chemically induced skin papillomas by dysregulation of the cell cycle and Wnt signaling. Hum. Mol. Genet. 19: 1387-1398.
6. Chan, K.C., et al. 2010. Polyphenol-rich extract from mulberry leaf inhibits vascular smooth muscle cell proliferation involving upregulation of p53 and inhibition of cyclin-dependent kinase. J. Agric. Food Chem. 58: 2536-2542.
4. Bhatia, B., et al. 2011. Mitogenic Sonic hedgehog signaling drives E2F1-dependent lipogenesis in progenitor cells and medulloblastoma. Oncogene 30: 410-422.

RESEARCH USE

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