SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-2 (C-20): sc-633

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 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: E2F2 (human) mapping to 1p36; E2f2 (mouse) mapping to 4 D3.

SOURCE

E2F-2 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of E2F-2 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.

Blocking peptide available for competition studies, sc-633 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-633 X, 200 µg/0.1 ml.

APPLICATIONS

E2F-2 (C-20) is recommended for detection of E2F-2 of mouse 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); partially cross-reactive with E2F-3 and E2F-1.

E2F-2 (C-20) is also recommended for detection of E2F-2 in additional species, including canine and bovine.

Suitable for use as control antibody for E2F-2 siRNA (h): sc-29298, E2F-2 siRNA (m): sc-29299, E2F-2 shRNA Plasmid (h): sc-29298-SH, E2F-2 shRNA Plasmid (m): sc-29299-SH, E2F-2 shRNA (h) Lentiviral Particles: sc-29298-V and E2F-2 shRNA (m) Lentiviral Particles: sc-29299-V.

E2F-2 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of E2F-2: 55 kDa.

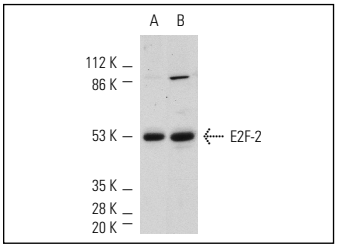
RESEARCH USE

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

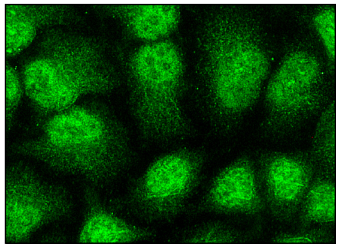
STORAGE

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

DATA



Western blot analysis of E2F-2 expression in phorbol ester-induced A-431 nuclear extracts (**A**,**B**). Antibodies tested include E2F-2 (L-20): sc-632 (**A**) and E2F-2 (C-20): sc-633 (**B**).



E2F-2 (C-20): sc-633. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. DeGregori, J., et al. 1997. Distinct roles for E2F proteins in cell growth control and apoptosis. Proc. Natl. Acad. Sci. USA 94: 7245-7250.
2. Wang, H., et al. 2007. C/EBPβ activates E2F-regulated genes *in vivo* via recruitment of the coactivator CREB-binding protein/P300. J. Biol. Chem. 282: 24679-24688.
3. Giangrande, P.H., et al. 2007. Distinct roles of E2F proteins in vascular smooth muscle cell proliferation and intimal hyperplasia. Proc. Natl. Acad. Sci. USA 104: 12988-12993.
4. Dirlam, A., et al. 2007. Deregulated E2f-2 underlies cell cycle and maturation defects in retinoblastoma null erythroblasts. Mol. Cell. Biol. 27: 8713-8728.
5. Wang, H., et al. 2008. Involvement of the p38 mitogen-activated protein kinase α, β, and γ isoforms in myogenic differentiation. Mol. Biol. Cell 19: 1519-1528.
6. Workman, A., et al. 2010. Productive infection and bICP0 early promoter activity of bovine herpesvirus 1 are stimulated by E2F1. J. Virol. 84: 6308-6317.
7. Azkargorta, M., et al. 2010. Differential proteomics analysis reveals a role for E2F2 in the regulation of the Ahr pathway in T lymphocytes. Mol. Cell. Proteomics 9: 2184-2194.
8. Bueno, M.J., et al. 2010. Multiple E2F-induced microRNAs prevent replicative stress in response to mitogenic signaling. Mol. Cell. Biol. 30: 2983-2995.