SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-2 (L-20): sc-632

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.

SOURCE

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

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-632 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-632 X, 200 µg/0.1 ml.

APPLICATIONS

E2F-2 (L-20) is recommended for detection of E2F-2 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 and 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-2 siRNA (h): sc-29298, E2F-2 shRNA Plasmid (h): sc-29298-SH and E2F-2 shRNA (h) Lentiviral Particles: sc-29298-V.

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

Molecular Weight of E2F-2: 55 kDa.

Positive Controls: A-431 + PMA nuclear extract: sc-2123, Hep G2 cell lysate: sc-2227 or Ramos cell lysate: sc-2216.

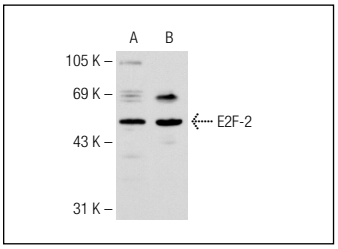
STORAGE

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

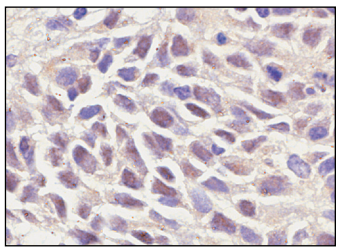
RESEARCH USE

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

DATA



E2F-2 (L-20): sc-632. Western blot analysis of E2F-2 expression in Hep G2 (**A**) and Ramos (**B**) nuclear extracts.



E2F-2 (L-20): sc-632. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tumor showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Liu, N., et al. 1997. Cell cycle regulated repression of B-Myb transcription: cooperation of an E2F site with a contiguous corepressor element. Nucleic Acids Res. 24: 2905-2910.
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3. Ebelt, H., et al. 2008. E2F2 expression induces proliferation of terminally differentiated cardiomyocytes *in vivo*. Cardiovasc. Res. 80: 219-226.
4. Molina-Privado, I., et al. 2009. E2F1 expression is deregulated and plays an oncogenic role in sporadic Burkitt's lymphoma. Cancer Res. 69: 4052-4058.
5. Alvaro-Blanco, J., et al. 2009. A novel factor distinct from E2F mediates C-MYC promoter activation through its E2F element during exit from quiescence. Carcinogenesis 30: 440-448.
6. Liu, W., et al. 2010. PHF8 mediates histone H4 lysine 20 demethylation events involved in cell cycle progression. Nature 466: 508-512.
7. Kwon, M.J., et al. 2010. E2F1 expression predicts outcome in Korean women who undergo surgery for breast carcinoma. Ann. Surg. Oncol. 17: 564-571.
8. Hayami, S., et al. 2010. Overexpression of the JmjC histone demethylase KDM5B in human carcinogenesis: involvement in the proliferation of cancer cells through the E2F/RB pathway. Mol. Cancer 9: 59.
9. Xanthoulis, A., et al. 2012. The relationship between E2F family members and tumor growth in colorectal adenocarcinomas: A comparative immunohistochemical study of 100 cases. Appl. Immunohistochem. Mol. Morphol. 22: 471-477.