

E2F-4 (RK-13): sc-511

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 G₁ 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, E2F-6 and E2F-7 each of which forms heterodimers with a second protein, DP-1, forming an "active" E2F transcriptional regulatory complex.

CHROMOSOMAL LOCATION

Genetic locus: E2F4 (human) mapping to 16q22.1; E2f4 (mouse) mapping to 8 D3.

SOURCE

E2F-4 (RK-13) is a mouse monoclonal antibody raised against amino acids 108-300 of E2F-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-511 X, 200 µg/0.1 ml.

E2F-4 (RK-13) is available conjugated to agarose (sc-511 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-511 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-511 PE), fluorescein (sc-511 FITC), Alexa Fluor® 488 (sc-511 AF488), Alexa Fluor® 546 (sc-511 AF546), Alexa Fluor® 594 (sc-511 AF594) or Alexa Fluor® 647 (sc-511 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-511 AF680) or Alexa Fluor® 790 (sc-511 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

E2F-4 (RK-13) is recommended for detection of E2F-4 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for E2F-4 siRNA (h): sc-29300, E2F-4 siRNA (m): sc-35248, E2F-4 shRNA Plasmid (h): sc-29300-SH, E2F-4 shRNA Plasmid (m): sc-35248-SH, E2F-4 shRNA (h) Lentiviral Particles: sc-29300-V and E2F-4 shRNA (m) Lentiviral Particles: sc-35248-V.

E2F-4 (RK-13) X TransCruz antibody is recommended for ChIP assays.

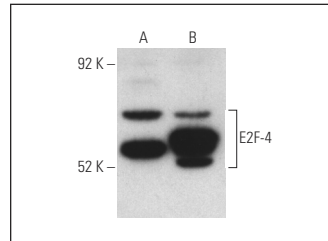
Molecular Weight of E2F-4: 60 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

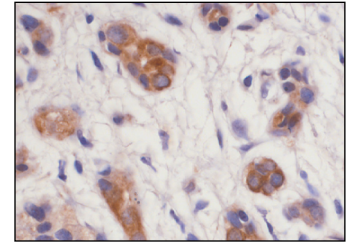
STORAGE

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

DATA



E2F-4 (RK-13) HRP: sc-511 HRP. Direct western blot analysis of E2F-4 expression in HeLa nuclear extract (A) and c4 whole cell lysate (B).



E2F-4 (RK-13): sc-511. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas tumor.

SELECT PRODUCT CITATIONS

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- Bindra, R.S., et al. 2007. Repression of Rad51 gene expression by E2F-4/p130 complexes in hypoxia. *Oncogene* 26: 2048-2057.
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- Hasui, K., et al. 2012. Development of ultra-super sensitive immunohistochemistry and its application to the etiological study of adult T-cell leukemia/lymphoma. *Acta Histochem. Cytochem.* 45: 83-106.
- Lakshmi, S.P., et al. 2017. Transforming growth factor β suppresses peroxisome proliferator-activated receptor γ expression via both Smad binding and novel TGF- β inhibitory elements. *Biochem. J.* 474: 1531-1546.
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- Wei, J., et al. 2022. Cellular Id1 inhibits hepatitis B virus transcription by interacting with the novel covalently closed circular DNA-binding protein E2F4. *Int. J. Biol. Sci.* 18: 65-81.

RESEARCH USE

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

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