SANTA CRUZ BIOTECHNOLOGY, INC.

E4F1 (D-12): sc-514718

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

E4F1 (E4F transcription factor 1), also known as E4F, is a 784 amino acid protein that localizes to both the nucleus and the cytoplasm and contains nine C_2H_2-type zinc fingers. Expressed ubiquitously in adult and fetal tissues, E4F1 exists as a homodimer that binds DNA and is thought to act as a transcriptional repressor and may also play a role in cell survival and growth via cell cycle control. Additionally, E4F1 is thought to function as a ubiquitin ligase that mediates the ubiquitination (and subsequent degradation) of target proteins and may be involved in the p53 tumor suppressor pathway. E4F1, which may be post-translationally phosphorylated or sumoylated, is subject to proteolytic cleavage which results in the creation of a short peptide with specific DNA binding capabilities.

REFERENCES

1. Fernandes, E.R. and Rooney, R.J. 1997. The adenovirus E1A-regulated transcription factor E4F is generated from the human homolog of nuclear factor phiAP3. Mol. Cell. Biol. 17: 1890-1903.
2. Saccone, S., et al. 1998. Assignment of the E1A-regulated transcription factor E4F gene (E4F1) to human chromosome band 16p13.3 by *in situ* hybridization and somatic cell hybrids. Cytogenet. Cell Genet. 82: 99-100.
3. Rooney, R.J., et al. 1998. Chromosomal location and tissue expression of the gene encoding the adenovirus E1A-regulated transcription factor E4F in humans and mice. Mamm. Genome 9: 320-323.
4. Sandy, P., et al. 2000. p53 is involved in the $p120^{E4F}$-mediated growth arrest. Oncogene 19: 188-199.
5. Fajas, L., et al. 2000. pRB binds to and modulates the transrepressing activity of the E1A-regulated transcription factor $p120^{E4F}$. Proc. Natl. Acad. Sci. USA 97: 7738-7743.

CHROMOSOMAL LOCATION

Genetic locus: E4F1 (human) mapping to 16p13.3; E4f1 (mouse) mapping to 17 A3.3.

SOURCE

E4F1 (D-12) is a mouse monoclonal antibody raised against amino acids 1-240 mapping at the N-terminus of E4F1 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.

E4F1 (D-12) is available conjugated to agarose (sc-514718 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514718 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514718 PE), fluorescein (sc-514718 FITC), Alexa Fluor® 488 (sc-514718 AF488), Alexa Fluor® 546 (sc-514718 AF546), Alexa Fluor® 594 (sc-514718 AF594) or Alexa Fluor® 647 (sc-514718 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514718 AF680) or Alexa Fluor® 790 (sc-514718 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

E4F1 (D-12) is recommended for detection of E4F1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for E4F1 siRNA (h): sc-93081, E4F1 siRNA (m): sc-143261, E4F1 shRNA Plasmid (h): sc-93081-SH, E4F1 shRNA Plasmid (m): sc-143261-SH, E4F1 shRNA (h) Lentiviral Particles: sc-93081-V and E4F1 shRNA (m) Lentiviral Particles: sc-143261-V.

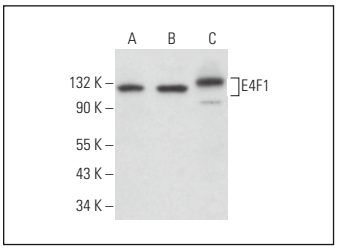
Molecular Weight of E4F1: 83 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or MCF7 whole cell lysate: sc-2206.

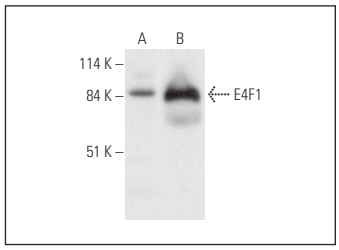
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



E4F1 (D-12): sc-514718. Western blot analysis of E4F1 expression in MCF7 (**A**), HeLa (**B**) and KNRK (**C**) whole cell lysates.



E4F1 (D-12): sc-514718. Western blot analysis of E4F1 expression in Jurkat whole cell lysate (**A**) and human tongue tissue extract (**B**).

SELECT PRODUCT CITATIONS

1. Li, H., et al. 2022. Destabilization of TP53 by USP10 is essential for neonatal autophagy and survival. Cell Rep. 41: 111435.

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.