

E2F-3 (D-2): sc-28308

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: E2F3 (human) mapping to 6p22.3; E2f3 (mouse) mapping to 13 A3.2.

SOURCE

E2F-3 (D-2) is a mouse monoclonal antibody raised against amino acids 1-110 of E2F-3 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 Gel Supershift and ChIP applications, sc-28308 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

E2F-3 (D-2) is recommended for detection of E2F-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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 E2F-3 siRNA (h): sc-37817, E2F-3 siRNA (m): sc-37818, E2F-3 shRNA Plasmid (h): sc-37817-SH, E2F-3 shRNA Plasmid (m): sc-37818-SH, E2F-3 shRNA (h) Lentiviral Particles: sc-37817-V and E2F-3 shRNA (m) Lentiviral Particles: sc-37818-V.

E2F-3 (D-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

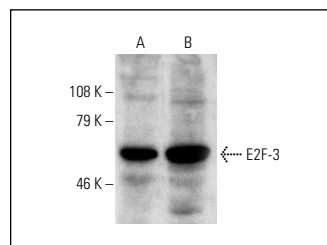
Molecular Weight of E2F-3: 45 kDa.

Positive Controls: MM-142 nuclear extract: sc-2139, 3611-RF nuclear extract: sc-2143 or KNRK whole cell lysate: sc-2214.

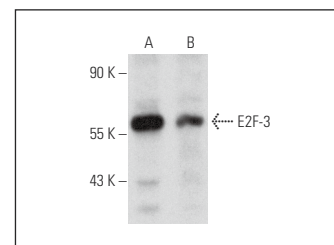
RECOMMENDED SUPPORT REAGENTS

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



E2F-3 (D-2): sc-28308. Western blot analysis of E2F-3 expression in MM-142 (A) and 3611-RF (B) nuclear extracts.



E2F-3 (D-2): sc-28308. Western blot analysis of E2F-3 expression in KNRK (A) and RPE-J (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cole, K.A., et al. 2008. A functional screen identifies miR-34a as a candidate neuroblastoma tumor suppressor gene. *Mol. Cancer Res.* 6: 735-742.
2. Hervouet, E., et al. 2012. Kinetics of DNA methylation inheritance by the Dnmt1-including complexes during the cell cycle. *Cell Div.* 7: 5.
3. Karwaciak, I., et al. 2014. Regulation of the human ABCB10 gene by E2F transcription factors. *Genomics* 104: 520-529.
4. Liu, N., et al. 2018. MicroRNA-433 reduces cell proliferation and invasion in non-small cell lung cancer via directly targeting E2F transcription factor 3. *Mol. Med. Rep.* 18: 1155-1164.
5. Parodi, S., et al. 2020. The over-expression of E2F3 might serve as prognostic marker for neuroblastoma patients with stage 4S disease. *Diagnostics* 10: 315.
6. Ognibene, M., et al. 2022. E2F3 gene expression is a potential negative prognostic marker for localised and MYCN not-amplified neuroblastoma: results of in silico analysis of 786 samples. *Pediatr. Blood Cancer* 69: e29800.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.