

## E2F-3 (PG30): sc-56665

### 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<sub>1</sub> 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 (PG30) is a mouse monoclonal antibody raised against recombinant E2F-3 of human origin.

### PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

E2F-3 (PG30) is available conjugated to agarose (sc-56665 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56665 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56665 PE), fluorescein (sc-56665 FITC), Alexa Fluor<sup>®</sup> 488 (sc-56665 AF488), Alexa Fluor<sup>®</sup> 546 (sc-56665 AF546), Alexa Fluor<sup>®</sup> 594 (sc-56665 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-56665 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-56665 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-56665 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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### APPLICATIONS

E2F-3 (PG30) is recommended for detection of E2F-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with other members of the E2F family.

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.

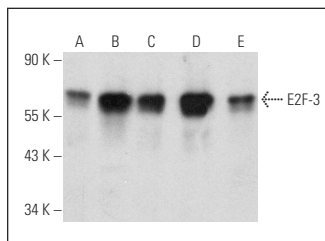
Molecular Weight of E2F-3: 55 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, Y79 cell lysate: sc-2240 or HEL 92.1.7 cell lysate: sc-2270.

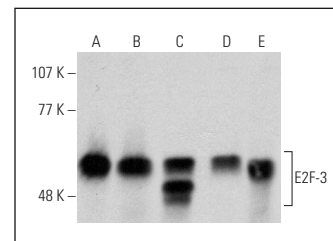
### STORAGE

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

### DATA



E2F-3 (PG30): sc-56665. Western blot analysis of E2F-3 expression in COLO 320DM (A), Jurkat (B), SK-N-SH (C), SH-SY5Y (D) and HEL 92.1.7 (E) whole cell lysates.



E2F-3 (PG30): sc-56665. Western blot analysis of E2F-3 expression in SH-SY5Y (A), Y79 (B), Jurkat (C) and SK-N-MC (D) whole cell lysates and Y79 nuclear extract (E). Detection reagent used: m-IgGκ BP-HRP: sc-516102.

### SELECT PRODUCT CITATIONS

- Docquier, A., et al. 2012. The RIP140 gene is a transcriptional target of E2F1. *PLoS ONE* 7: e35839.
- Chirackal Manavalan, A.P., et al. 2019. CDK12 controls G<sub>1</sub>/S progression by regulating RNAPII processivity at core DNA replication genes. *EMBO Rep.* 20: e47592.
- Li, S., et al. 2020. Hsa\_circ\_0008934 promotes the proliferation and migration of osteosarcoma cells by targeting miR-145-5p to enhance E2F3 expression. *Int. J. Biochem. Cell Biol.* 127: 105826.
- Gao, C., et al. 2020. Downregulating CREBBP inhibits proliferation and cell cycle progression and induces daunorubicin resistance in leukemia cells. *Mol. Med. Rep.* 22: 2905-2915.
- Roelofs, P.A., et al. 2020. Characterization of the mechanism by which the RB/E2F pathway controls expression of the cancer genomic DNA deaminase APOBEC3B. *Elife* 9: e61287.
- Segeren, H.A., et al. 2020. Excessive E2F transcription in single cancer cells precludes transient cell-cycle exit after DNA damage. *Cell Rep.* 33: 108449.
- Chen, H., et al. 2020. Knockdown SNHG20 suppresses nonsmall cell lung cancer development by repressing proliferation, migration and invasion, and inducing apoptosis by regulating miR-2467-3p/E2F3. *Cancer Biother. Radiopharm.* E-published.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.