

# E2F-1 (C-7): sc-137059

## 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 transcriptional 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: E2F1 (human) mapping to 20q11.22; E2f1 (mouse) mapping to 2 H1.

## SOURCE

E2F-1 (C-7) is a mouse monoclonal antibody raised against amino acids 301-437 of E2F-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> 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-137059 X, 200 µg/0.1 ml.

E2F-1 (C-7) is available conjugated to Alexa Fluor® 790 (sc-137059 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

E2F-1 (C-7) is recommended for detection of E2F-1 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 E2F-1 siRNA (h): sc-29297, E2F-1 siRNA (m): sc-35247, E2F-1 shRNA Plasmid (h): sc-29297-SH, E2F-1 shRNA Plasmid (m): sc-35247-SH, E2F-1 shRNA (h) Lentiviral Particles: sc-29297-V and E2F-1 shRNA (m) Lentiviral Particles: sc-35247-V.

E2F-1 (C-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

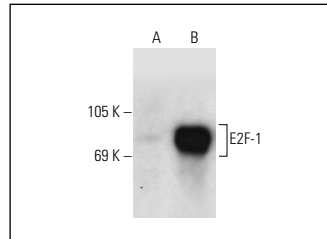
Molecular Weight of E2F-1: 60 kDa.

Positive Controls: E2F-1 (h2): 293T Lysate: sc-116659, MOLT-4 cell lysate: sc-2233 or F9 cell lysate: sc-2245.

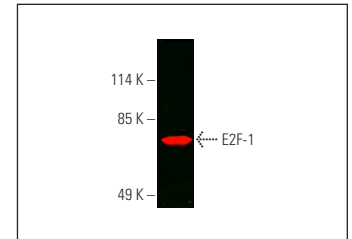
## STORAGE

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

## DATA



E2F-1 (C-7): sc-137059. Western blot analysis of E2F-1 expression in non-transfected: sc-117752 (A) and human E2F-1 transfected: sc-116659 (B) 293T whole cell lysates.




E2F-1 (C-7) Alexa Fluor® 790: sc-137059 AF790. Direct near-infrared western blot analysis of E2F-1 expression in F9 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214.

## SELECT PRODUCT CITATIONS

- Ahmadianpour, M.R., et al. 2013. Static magnetic field of 6 mT induces apoptosis and alters cell cycle in p53 mutant Jurkat cells. *Electromagn. Biol. Med.* 32: 9-19.
- Ahmadianpour, M.R., et al. 2013. Gamma radiation alters cell cycle and induces apoptosis in p53 mutant E6.1 Jurkat cells. *Appl. Radiat. Isot.* 71: 29-33.
- Liu, R., et al. 2017. A new perspective for osteosarcoma therapy: proteasome inhibition by MLN9708/2238 successfully induces apoptosis and cell cycle arrest and attenuates the invasion ability of osteosarcoma cells *in vitro*. *Cell. Physiol. Biochem.* 41: 451-465.
- Lee, J.W., et al. 2019. RUNX3 regulates cell cycle-dependent chromatin dynamics by functioning as a pioneer factor of the restriction-point. *Nat. Commun.* 10: 1897.
- Lei, B., et al. 2020. Phosphoribosyl-pyrophosphate synthetase 2 (PRPS2) depletion regulates spermatogenic cell apoptosis and is correlated with hypospermatogenesis. *Asian J. Androl.* 22: 493-499.
- Che, H., et al. 2020. p16 deficiency attenuates intervertebral disc degeneration by adjusting oxidative stress and nucleus pulposus cell cycle. *Elife* 9: e52570.
- Yun, H.S., et al. 2022. A novel function of HRP-3 in regulating cell cycle progression via the HDAC-E2F1-cyclin E pathway in lung cancer. *Cancer Sci.* 113: 145-155.

## RESEARCH USE

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



See **E2F-1 (KH95): sc-251** for E2F-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.