SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-6 (TFE61): sc-53273

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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_1 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: E2F6 (human) mapping to 2p25.1.

SOURCE

E2F-6 (TFE61) is a mouse monoclonal antibody raised against recombinant E2F-6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

E2F-6 (TFE61) is available conjugated to agarose (sc-53273 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53273 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53273 PE), fluorescein (sc-53273 FITC), Alexa Fluor® 488 (sc-53273 AF488), Alexa Fluor® 546 (sc-53273 AF546), Alexa Fluor® 594 (sc-53273 AF594) or Alexa Fluor® 647 (sc-53273 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53273 AF680) or Alexa Fluor® 790 (sc-53273 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

E2F-6 (TFE61) is recommended for detection of E2F-6 of 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)].

Suitable for use as control antibody for E2F-6 siRNA (h): sc-37819, E2F-6 shRNA Plasmid (h): sc-37819-SH and E2F-6 shRNA (h) Lentiviral Particles: sc-37819-V.

Molecular Weight of E2F-6: 35 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

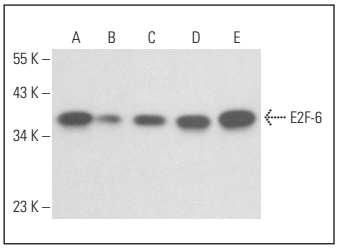
RESEARCH USE

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

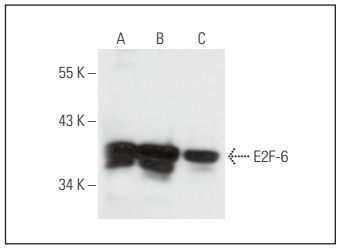
STORAGE

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

DATA



E2F-6 (TFE61): sc-53273. Western blot analysis of E2F-6 expression in Jurkat (**A**) and HeLa (**B**) nuclear extracts and A549 (**C**), HL-60 (**D**) and CCRF-CEM (**E**) whole cell lysates.



E2F-6 (TFE61): sc-53273. Western blot analysis of E2F-6 expression in K-562 (**A**), Jurkat (**B**) and HeLa (**C**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Attwooll, C., et al. 2005. A novel repressive E2F-6 complex containing the polycomb group protein, EPC1, that interacts with EZH2 in a proliferation-specific manner. J. Biol. Chem. 280: 1199-1208.
2. McLaughlin-Drubin, M.E., et al. 2008. Human papillomavirus type 16 E7 oncoprotein associates with E2F-6. J. Virol. 82: 8695-8705.
3. Wan, Z., et al. 2010. Human parvovirus B19 causes cell cycle arrest of human erythroid progenitors via deregulation of the E2F family of transcription factors. J. Clin. Invest. 120: 3530-3544.
4. Yang, L., et al. 2011. ncRNA- and Pc2 methylation-dependent gene relocation between nuclear structures mediates gene activation programs. Cell 147: 773-788.
5. Wang, X., et al. 2013. HOXC9 directly regulates distinct sets of genes to coordinate diverse cellular processes during neuronal differentiation. BMC Genomics 14: 830.
6. Wang, Y., et al. 2016. Epigenetic factor EPC1 is a master regulator of DNA damage response by interacting with E2F1 to silence death and activate metastasis-related gene signatures. Nucleic Acids Res. 44: 117-133.
7. Llabata, P., et al. 2020. Multi-omics analysis identifies MGA as a negative regulator of the MYC pathway in lung adenocarcinoma. Mol. Cancer Res. 18: 574-584.
8. 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.

PROTOCOLS

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