SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-6 (H-50): sc-22823

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 and E2F-6, 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 (H-50) is a rabbit polyclonal antibody raised against amino acids 232-281 mapping at the C-terminus of E2F-6 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-22823 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.

RESEARCH USE

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

APPLICATIONS

E2F-6 (H-50) is recommended for detection of E2F-6 of human origin by Western Blotting (starting dilution 1:200, 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-6 siRNA (h): sc-37819, E2F-6 shRNA Plasmid (h): sc-37819-SH and E2F-6 shRNA (h) Lentiviral Particles: sc-37819-V.

E2F-6 (H-50) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

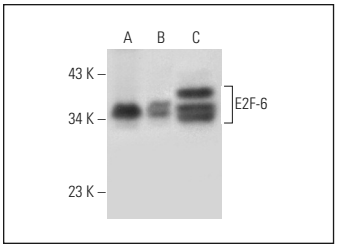
Molecular Weight of E2F-6: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

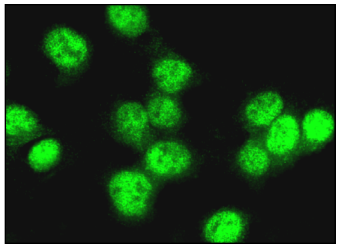
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



E2F-6 (H-50): sc-22823. Western blot analysis of E2F-6 expression in Jurkat (**A**) and HeLa (**B**) nuclear extracts and Hep G2 whole cell lysate (**C**).



E2F-6 (H-50): sc-22823. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Hayashi, R., et al. 2006. CdcA4 is an E2F transcription factor family-induced nuclear factor that regulates E2F-dependent transcriptional activation and cell proliferation. J. Biol. Chem. 281: 35633-35648.
2. Goto, Y., et al. 2006. Acute loss of transcription factor E2F1 induces mitochondrial biogenesis in HeLa cells. J. Cell. Physiol. 209: 923-934.
3. Xu, X., et al. 2007. A comprehensive ChIP-chip analysis of E2F-1, E2F-4, and E2F-6 in normal and tumor cells reveals interchangeable roles of E2F family members. Genome Res. 17: 1550-1561.
4. Rabinovich, A., et al. 2008. E2F *in vivo* binding specificity: comparison of consensus versus nonconsensus binding sites. Genome Res. 18: 1763-1777.
5. Alvaro-Blanco, J., et al. 2009. A novel factor distinct from E2F mediates C-MYC promoter activation through its E2F element during exit from quiescence. Carcinogenesis 30: 440-448.