SANTA CRUZ BIOTECHNOLOGY, INC.

E2F-6 (E-5): sc-390022

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.

REFERENCES

1. Chellappan, S., et al. 1991. The E2F transcription factor is a cellular target for the RB protein. Cell 65: 1053-1061.
2. Chittenden, T., et al. 1991. The T/E1A-binding domain of the retinoblastoma product can interact selectively with a sequence-specific DNA-binding protein. Cell 65: 1073-1082.
3. Helin, K., et al. 1992. A cDNA encoding a pRB-binding protein with properties of the transcription factor E2F. Cell 70: 337-350.
4. Helin, K., et al. 1993. Heterodimerization of the transcription factors E2F-1 and DP-1 leads to cooperative trans-activation. Genes Dev. 7: 1850-1861.
5. Lees, J.A., et al. 1993. The retinoblastoma protein binds to a family of E2F transcription factors. Mol. Cell. Biol. 13: 7813-7825.

CHROMOSOMAL LOCATION

Genetic locus: E2f6 (mouse) mapping to 12 A1.1.

SOURCE

E2F-6 (E-5) is a mouse monoclonal antibody raised against amino acids 233-272 of E2F-6 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-390022 X, 200 µg/0.1 ml.

E2F-6 (E-5) is available conjugated to agarose (sc-390022 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390022 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390022 PE), fluorescein (sc-390022 FITC), Alexa Fluor® 488 (sc-390022 AF488), Alexa Fluor® 546 (sc-390022 AF546), Alexa Fluor® 594 (sc-390022 AF594) or Alexa Fluor® 647 (sc-390022 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390022 AF680) or Alexa Fluor® 790 (sc-390022 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

E2F-6 (E-5) is recommended for detection of E2F-6 of mouse and rat 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-6 siRNA (m): sc-37820, E2F-6 shRNA Plasmid (m): sc-37820-SH and E2F-6 shRNA (m) Lentiviral Particles: sc-37820-V.

E2F-6 (E-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

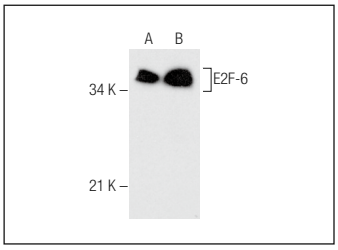
Molecular Weight of E2F-6: 35 kDa.

Positive Controls: mouse liver extract: sc-2256 or rat liver extract: sc-2395.

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-6 (E-5): sc-390022. Western blot analysis of E2F-6 expression in rat liver (**A**) and mouse liver (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Shen, Y., et al. 2018. Functional interrelationship between TFII-I and E2F transcription factors at specific cell cycle gene loci. J. Cell. Biochem. 119: 712-722.

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.