SANTA CRUZ BIOTECHNOLOGY, INC.

DP-1/3 (A-16): sc-16286

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 forms heterodimers with a second protein, designated DP-1, forming an "active" E2F transcriptional regulatory complex. Additional members of the E2F family include E2F-2, E2F-3, E2F-4, E2F-5 and DP-2.

REFERENCES

1. Helin, K., et al. 1992. A cDNA encoding a pRB-binding protein with properties of the transcription factor E2F. Cell 70: 337-350.
2. Nevins, J.R. 1992. E2F: A link between the Rb tumor suppressor protein and viral oncoproteins. Science 258: 424-429.
3. 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.
4. Krek, W., et al. 1993. Binding to DNA and the retinoblastoma gene product promoted by complex formation of different E2F family members. Science 262: 1557-1560.
5. Ginsberg, D., et al. 1994. E2F-4, a new member of the E2F transcription factor family, interacts with p107. Genes Dev. 8: 2665-2679.

CHROMOSOMAL LOCATION

Genetic locus: TFDP1 (human) mapping to 13q34, TFDP3 (human) mapping to Xq26.2; Tfdp1 (mouse) mapping to 8 A1.1.

SOURCE

DP-1/3 (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DP-1 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-16286 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-16286 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

DP-1/3 (A-16) is recommended for detection of DP-1 and DP-3 of mouse, rat and 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).

DP-1/3 (A-16) is also recommended for detection of DP-1 and DP-3 in additional species, including equine, canine, bovine, porcine and avian.

DP-1/3 (A-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

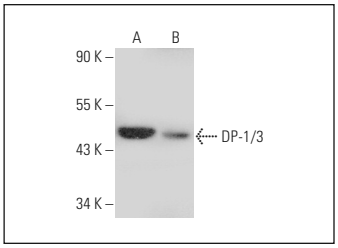
Molecular Weight of DP-1: 46 kDa.

Positive Controls: A-431 nuclear extract: sc-2122, Daudi cell lysate: sc-2415 or C2C12 whole cell lysates: sc-364188.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DP-1/3 (A-16): sc-16286. Western blot analysis of DP-1/3 expression in C2C12 (**A**) and Daudi (**B**) whole cell lysates.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **DP-1 (TFD-10): sc-53642** or **DP-1/3 (L7-7): sc-101031**, our highly recommended monoclonal alternatives to DP-1/3 (A-16).