

DP-2 (D-11): sc-374614

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 G₁ 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

- Helin, K., et al. 1992. A cDNA encoding a pRB-binding protein with properties of the transcription factor E2F. *Cell* 70: 337-350.
- Nevins, J.R. 1992. E2F: a link between the Rb tumor suppressor protein and viral oncoproteins. *Science* 258: 424-429.
- 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: TFDP2 (human) mapping to 3q23; Tfdp2 (mouse) mapping to 9 E3.3.

SOURCE

DP-2 (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-31 at the N-terminus of DP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-374614 X, 200 µg/0.1 ml.

DP-2 (D-11) is available conjugated to agarose (sc-374614 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374614 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374614 PE), fluorescein (sc-374614 FITC), Alexa Fluor® 488 (sc-374614 AF488), Alexa Fluor® 546 (sc-374614 AF546), Alexa Fluor® 594 (sc-374614 AF594) or Alexa Fluor® 647 (sc-374614 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374614 AF680) or Alexa Fluor® 790 (sc-374614 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374614 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

DP-2 (D-11) is recommended for detection of DP-2 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).

DP-2 (D-11) is also recommended for detection of DP-2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for DP-2 siRNA (h): sc-37815, DP-2 siRNA (m): sc-37816, DP-2 shRNA Plasmid (h): sc-37815-SH, DP-2 shRNA Plasmid (m): sc-37816-SH, DP-2 shRNA (h) Lentiviral Particles: sc-37815-V and DP-2 shRNA (m) Lentiviral Particles: sc-37816-V.

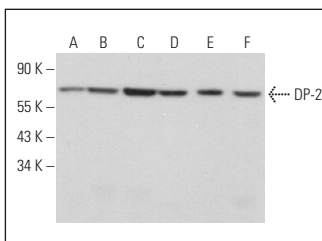
DP-2 (D-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of N-terminal truncated DP-2: 43 kDa.

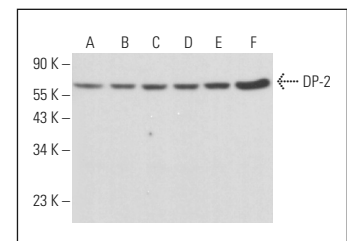
Molecular Weight of DP-2 splice variant: 55 kDa.

Positive Controls: A-431 nuclear extract: sc-2122, Hep G2 nuclear extract: sc-364819 or KNRK nuclear extract: sc-2141.

DATA



DP-2 (D-11): sc-374614. Western blot analysis of DP-2 expression in A-431 nuclear extract (A) and CCRF-CEM (B), MOLT-4 (C), 3T3-L1 (D), L6 (E) and KNRK (F) whole cell lysates.



DP-2 (D-11): sc-374614. Western blot analysis of DP-2 expression in A-431 (A), Hep G2 (B), KNRK (C), NIH/3T3 (D) and HeLa (E) nuclear extracts and Y79 whole cell lysate (F). Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.

PROTOCOLS

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

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