

DP-1/2 (G-3): sc-393398



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 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.
- 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: TFPD1 (human) mapping to 13q34, TFPD2 (human) mapping to 3q23; Tfdp1 (mouse) mapping to 8 A1.1, Tfdp2 (mouse) mapping to 9 E3.3.

SOURCE

DP-1/2 (G-3) is a mouse monoclonal antibody raised against amino acids 171-237 mapping within an internal region of DP-1 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.

DP-1/2 (G-3) is available conjugated to agarose (sc-393398 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393398 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393398 PE), fluorescein (sc-393398 FITC), Alexa Fluor® 488 (sc-393398 AF488), Alexa Fluor® 546 (sc-393398 AF546), Alexa Fluor® 594 (sc-393398 AF594) or Alexa Fluor® 647 (sc-393398 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393398 AF680) or Alexa Fluor® 790 (sc-393398 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DP-1/2 (G-3) is recommended for detection of DP-1 and 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).

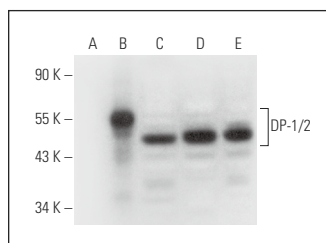
Molecular Weight of DP-1/2: 49 kDa.

Positive Controls: DP-1 (h2): 293T Lysate: sc-159192, HeLa whole cell lysate: sc-2200 or Raji whole cell lysate: sc-364236.

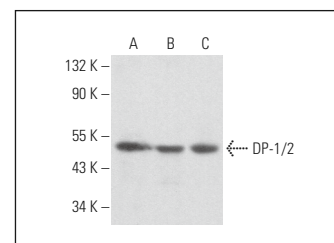
RECOMMENDED SUPPORT REAGENTS

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



DP-1/2 (G-3): sc-393398. Western blot analysis of DP-1 expression in non-transfected 293T: sc-117752 (A), human DP-1 transfected 293T: sc-159192 (B), HeLa (C) and Raji (D) whole cell lysates and A-431 nuclear extract (E).



DP-1/2 (G-3): sc-393398. Western blot analysis of DP-1/2 expression in Raji (A), THP-1 (B) and 3T3-L1 (C) whole cell lysates.

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.