

# NPDC-1 (C-20): sc-54136

## BACKGROUND

NPDC-1 (neural proliferation differentiation and control-1) is expressed in neurons once they have stopped dividing and begun to differentiate. NPDC-1 is transported from the Golgi apparatus via vesicles before becoming internalized by endosomes at the cell membrane. NPDC-1 interacts with Cdk2, D-type cyclins and the transcription factor E2F1. This interaction can lead to an increased replication time and might have implications in final neural differentiation and apoptosis. NPDC-1 has been shown to co-localize with synaptic vesicle proteins: synaptophysin, synaptobrevin 2 and Rab3 GEP (Rab3 GTP/GDP exchange protein). One function of NPDC-1 is to regulate retinoic acid-mediated events by directly interacting with retinoid receptors. The amino acid sequence of NPDC-1 is highly conserved between mouse, rat and human.

## REFERENCES

1. Galiana, E., Vernier, P., Dupont, E., Evrard, C. and Rouget, P. 1995. Identification of a neural-specific cDNA, NPDC-1, able to down-regulate cell proliferation and to suppress transformation. *Proc. Natl. Acad. Sci. USA* 92: 1560-1564.
2. Dupont, E., Sansal, I., Toru, D., Evrard, C. and Rouget, P. 1997. Identification of NPDC-1, gene involved in the control of proliferation and differentiation of neural and glial precursors. *C.R. Seances Soc. Biol. Fil.* 191: 95-104.
3. Dupont, E., Sansal, I., Evrard, C. and Rouget, P. 1998. Developmental pattern of expression of NPDC-1 and its interaction with E2F-1 suggest a role in the control of proliferation and differentiation of neural cells. *J. Neurosci. Res.* 51: 257-267.
4. Sansal, I., Dupont, E., Toru, D., Evrard, C. and Rouget, P. 2000. NPDC-1, a regulator of neural cell proliferation and differentiation, interacts with E2F-1, reduces its binding to DNA and modulates its transcriptional activity. *Oncogene* 19: 5000-5009.

## CHROMOSOMAL LOCATION

Genetic locus: NPDC1 (human) mapping to 9q34.3; Npdc1 (mouse) mapping to 2 A3.

## SOURCE

NPDC-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NPDC-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.

Blocking peptide available for competition studies, sc-54136 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.

## APPLICATIONS

NPDC-1 (C-20) is recommended for detection of NPDC-1 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).

NPDC-1 (C-20) is also recommended for detection of NPDC-1 in additional species, including bovine and avian.

Suitable for use as control antibody for NPDC-1 siRNA (h): sc-75951, NPDC-1 shRNA Plasmid (h): sc-75951-SH and NPDC-1 shRNA (h) Lentiviral Particles: sc-75951-V.

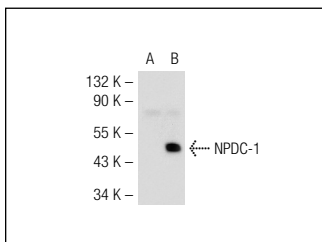
Molecular Weight of NPDC-1: 35 kDa.

Positive Controls: NPDC-1 (m): 293T Lysate: sc-127238.

## 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) 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



NPDC-1 (C-20): sc-54136. Western blot analysis of NPDC-1 expression in non-transfected: sc-117752 (A) and mouse NPDC-1 transfected: sc-127238 (B) 293T whole cell lysates.

## RESEARCH USE

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



Try **NPDC-1 (16E4): sc-65387**, our highly recommended monoclonal alternative to NPDC-1 (C-20).