

p53R2 (N-16): sc-10840



The Power to Question

BACKGROUND

The p53 gene is a highly characterized tumor suppressor that is often inactivated in various human cancers. p53 is a transcription factor that mediates cell cycle arrest and apoptosis by binding to DNA and activating the transcription of specific genes. p53 is also thought to be involved in DNA repair by the transcriptional activation of a ribonucleotide reductase gene, p53R2, after exposure to genotoxic stresses. p53R2 displays a significant similarity to ribonucleotide reductase small subunit (R2), and the expression of R2 is elevated at the onset of the S-phase of the cell cycle. However, only p53R2 expression is induced in response to ultraviolet and γ -irradiation and adriamycin treatment. p53R2 translocates to the nucleus upon DNA damage, and subsequently, supplies an immediate pool of dNTPs necessary for DNA repair.

CHROMOSOMAL LOCATION

Genetic locus: RRM2B (human) mapping to 8q22.3.

SOURCE

p53R2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of p53R2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10840 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p53R2 (N-16) is recommended for detection of p53R2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 p53R2 siRNA (h): sc-36158, p53R2 shRNA Plasmid (h): sc-36158-SH and p53R2 shRNA (h) Lentiviral Particles: sc-36158-V.

Molecular Weight of p53R2: 45 kDa.

Positive Controls: p53R2 (h): 293T Lysate: sc-111702, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

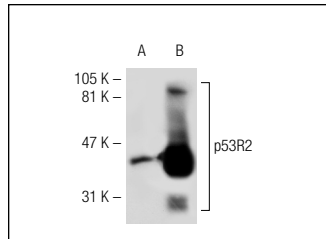
PROTOCOLS

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

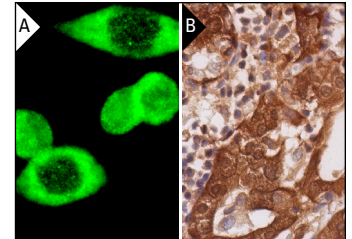
RESEARCH USE

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

DATA



p53R2 (N-16): sc-10840. Western blot analysis of p53R2 expression in non-transfected: sc-117752 (A) and human p53R2 transfected: sc-111702 (B) 293T whole cell lysates.



p53R2 (N-16): sc-10840. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

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- Heffeter, P., et al. 2009. Ribonucleotide reductase as one important target of [Tris(1,10-phenanthroline)lanthanum(III)] trithiocyanate (KP772). *Curr. Cancer Drug Targets* 9: 595-607.
- Zhou, J., et al. 2010. Modulation of the ribonucleotide reductase-antimetabolite drug interaction in cancer cell lines. *J. Nucleic Acids* 2010: 597098.
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- Lin, Z.P., et al. 2011. Reduced level of ribonucleotide reductase R2 subunits increases dependence on homologous recombination repair of cisplatin-induced DNA damage. *Mol. Pharmacol.* 80: 1000-1012.
- Saiko, P., et al. 2011. A novel N-hydroxy-N'-aminoguanidine derivative inhibits ribonucleotide reductase activity: effects in human HL-60 promyelocytic leukemia cells and synergism with arabinofuranosylcytosine (Ara-C). *Biochem. Pharmacol.* 81: 50-59.



Try **R2/p53R2 (F-9): sc-376973** or **p53R2 (B-10): sc-137175**, our highly recommended monoclonal alternatives to p53R2 (N-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **R2/p53R2 (F-9): sc-376973**.