

## p53 (M-19): sc-1312



The Power to Question

## BACKGROUND

p53, a DNA-binding, oligomerization domain- and transcription activation domain-containing tumor suppressor, upregulates growth arrest and apoptosis-related genes in response to stress signals, thereby influencing programmed cell death, cell differentiation, and cell cycle control mechanisms. p53 localizes to the nucleus, yet can be chaperoned to the cytoplasm by the negative regulator, MDM2. MDM2 is an E3 ubiquitin ligase that is upregulated in the presence of active p53, where it poly-ubiquitinates p53 for proteasome targeting. p53 fluctuates between latent and active DNA-binding conformations and is differentially activated through posttranslational modifications, including phosphorylation and acetylation. Mutations in the DNA-binding domain (DBD) of p53, amino acids 110-286, can compromise energetically-favorable association with *cis* elements and are implicated in several human cancers.

## CHROMOSOMAL LOCATION

Genetic locus: TP53 (human) mapping to 17p13.1; Trp53 (mouse) mapping to 11 B3.

## SOURCE

p53 (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of p53 of mouse 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-1312 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p53 (M-19) is recommended for detection of p53 of mouse, rat and, to a lesser extent, 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).

Suitable for use as control antibody for p53 siRNA (h): sc-29435, p53 siRNA (m): sc-29436, p53 shRNA Plasmid (h): sc-29435-SH, p53 shRNA Plasmid (m): sc-29436-SH, p53 shRNA (h) Lentiviral Particles: sc-29435-V and p53 shRNA (m) Lentiviral Particles: sc-29436-V.

Molecular Weight of p53: 53 kDa.

Positive Controls: WRL19L cell lysate: sc-3805, p53 (m): 293T Lysate: sc-125766 or mouse LacZ whole cell lysate: sc-364371.

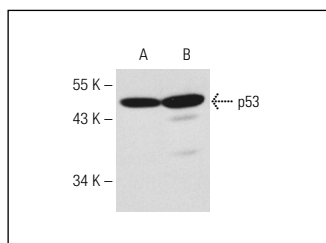
## STORAGE

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

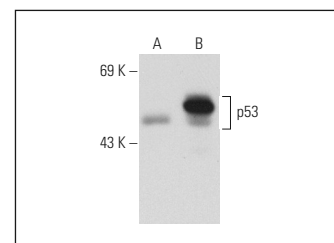
## RESEARCH USE

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

## DATA



p53 (R-19): sc-1313. Western blot analysis of p53 expression in WR19L (A) and mouse LacZ (B) whole cell lysates.



p53 (M-19): sc-1312. Western blot analysis of p53 expression in non-transfected: sc-117752 (A) and human p53 transfected: sc-158802 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

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- McKee, C.M., et al. 2006. Testicular germ cell sensitivity to TRAIL-induced apoptosis is dependent upon p53 expression and is synergistically enhanced by DR5 agonistic antibody treatment. *Apoptosis* 11: 2237-2250.
- Narai, S., et al. 2006. Trp53 affects the developmental anomaly of clefts of the palate in irradiated mouse embryos but not clefts of the lip with or without the palate. *Radiat. Res.* 166: 877-882.
- Isono, K., et al. 2006. Overlapping roles for homeodomain-interacting protein kinases Hipk1 and Hipk2 in the mediation of cell growth in response to morphogenetic and genotoxic signals. *Mol. Cell. Biol.* 26: 2758-2771.
- Yamamoto, T., et al. 2010. Clonally expanding thymocytes having lineage capability in gamma-ray-induced mouse atrophic thymus. *Int. J. Radiat. Oncol. Biol. Phys.* 77: 235-243.
- Forshell, T.P., et al. 2010. Chemoprevention of B-cell lymphomas by inhibition of the Myc target spermidine synthase. *Cancer Prev. Res.* 3: 140-147.

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Try **p53 (A-1): sc-393031** or **p53 (pAb 122): sc-56182**, our highly recommended monoclonal alternatives to p53 (M-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p53 (A-1): sc-393031**.