

p53 (PAb 1104): sc-53396

BACKGROUND

p53, a DNA-binding, oligomerization domain- and transcription activation domain-containing tumor suppressor that 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, an E3 ubiquitin ligase that is upregulated in the presence of active p53, where MDM2 polyubiquitinates p53 for proteasome targeting. p53 fluctuates between latent and active (DNA-binding) conformations, and is differentially activated through post-translational 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.

REFERENCES

1. Banks, L., et al. 1986. Isolation of human p53-specific monoclonal antibodies and their use in the studies of human p53 expression. *Eur. J. Biochem.* 159: 529-534.
2. Hupp, T.R., et al. 1992. Regulation of the specific DNA-binding function of p53. *Cell* 71: 875-886.
3. Levine, A.J. 1997. p53, the cellular gatekeeper for growth and division. *Cell* 88: 323-331.
4. Ashcroft, M., et al. 1999. Regulation of p53 stability. *Oncogene* 18: 7637-7643.
5. Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
6. Chene, P. 2001. The role of tetramerization in p53 function. *Oncogene* 20: 2611-2617.
7. Minamoto, T., et al. 2001. Distinct pattern of p53 phosphorylation in human tumors. *Oncogene* 20: 3341-3347.
8. LocusLink Report (LocusID: 7157). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: TP53 (human) mapping to 17p13.1.

SOURCE

p53 (PAb 1104) is a mouse monoclonal antibody raised against purified p53 of human origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

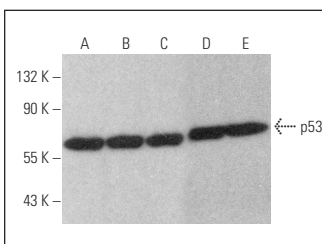
p53 (PAb 1104) is recommended for detection of p53 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

Molecular Weight of p53: 53 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

DATA



p53 (PAb 1104): sc-53396. Western blot analysis of p53 expression in BT-20 (A), HeLa (B), MCF7 (C), SW480 (D) and A-431 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Nayak, M.S., et al. 2007. Effect of a single nucleotide polymorphism in the murine double minute 2 promoter (SNP309) on the sensitivity to topoisomerase II-targeting drugs. *Cancer Res.* 67: 5831-5839.

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.



See **p53 (DO-1): sc-126** for p53 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.