

p53 (FL-393): sc-6243

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, an E3 ubiquitin ligase that is upregulated in the presence of active p53, where MDM2 poly-ubiquitinates 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, amino acids 110-286) of p53 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 (FL-393) is available as either rabbit (sc-6243) or goat (sc-6243-G) polyclonal affinity purified antibody raised against amino acids 1-393 representing full length p53 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.

Available as agarose conjugate for immunoprecipitation, sc-6243 AC, 500 µg/0.25 ml agarose in 1 ml., TransCruz reagent for Gel Supershift and ChIP applications, sc-6243 X, 200 µg/0.1 ml., HRP conjugate for Western blotting, sc-6243 HRP, 200 µg/1 ml., fluorescein (sc-6243 FITC) or rhodamine (sc-6243 TRITC) conjugates for immunofluorescence, 200 µg/1 ml., and Alexa Fluor[®] 405 (sc-6243 AF405), Alexa Fluor[®] 488 (sc-6243 AF488) or Alexa Fluor[®] 647 (sc-6243 AF647) conjugates for flow cytometry or immunofluorescence; 100 µg/2 ml.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

p53 (FL-393) is recommended for detection of p53 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

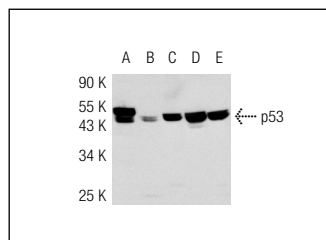
Suitable for use as control antibody for p53 siRNA (h): sc-29435, p53 siRNA (m): sc-29436, p53 shRNA Plasmid (h): sc-29435-SH, p53 shRNA Plasmid (m): sc-29436-SH, p53 shRNA (h) Lentiviral Particles: sc-29435-V and p53 shRNA (m) Lentiviral Particles: sc-29436-V.

Positive Controls: p53 (h3): 293T Lysate: sc-158802, A-431 whole cell lysate: sc-2201 or BC₃H1 cell lysate: sc-2299.

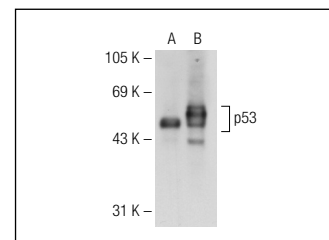
STORAGE

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

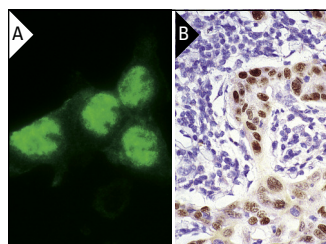
DATA



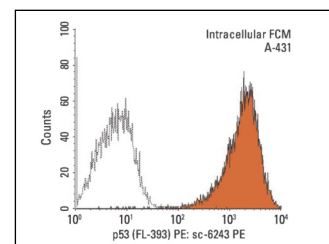
p53 (FL-393): sc-6243. Western blot analysis of p53 expression in A-431 (A), BC₃H1 (B), MCP-5 (C), Lac Z (D) and WR19L (E) whole cell lysates.



p53 (FL-393): sc-6243. Western blot analysis of p53 expression in non-transfected: sc-117752 (A) and human p53 transfected: sc-158802 (B) 293T whole cell lysates.



p53 (FL-393): sc-6243. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue. Note nuclear staining of ductal epithelia (A). Immunofluorescence staining of methanol-fixed A-431 cells showing nuclear localization (B).



p53 (FL-393) PE: sc-6243 PE. Intracellular FCM analysis of fixed and permeabilized A-431 cells. Black line histogram represents the isotype control, normal rabbit IgG: sc-3871.

SELECT PRODUCT CITATIONS

1. Takaoka, A., et al. 2003. Integration of interferon- α/β signalling to p53 responses in tumour suppression and antiviral defence. *Nature* 424: 516-523.
2. Perissi, V., et al. 2004. A corepressor/coactivator exchange complex required for transcriptional activation by nuclear receptors and other regulated transcription factors. *Cell* 116: 511-526.
3. Ohtsuka, T., et al. 2004. ASC is a Bax adaptor and regulates the p53-Bax mitochondrial apoptosis pathway. *Nat. Cell Biol.* 6: 121-128.
4. Sun, P., et al. 2007. PRAK is essential for Ras-induced senescence and tumor suppression. *Cell* 128: 295-308.
5. Colaluca, I.N., et al. 2008. NUMB controls p53 tumour suppressor activity. *Nature* 451: 76-80.
6. Saramaki, A., et al. 2009. Cyclical chromatin looping and transcription factor association on the regulatory regions of the p21 (CDKN1A) gene in response to 1 α ,25-Dihydroxyvitamin D₃. *J. Biol. Chem.* 113: 8073-8082.

RESEARCH USE

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