

p53 (pAb 122): sc-56182



The Power to Question

BACKGROUND

p53 is 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.

CHROMOSOMAL LOCATION

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

SOURCE

p53 (pAb 122) is a mouse monoclonal antibody raised against SV40 transformed B4 cells of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p53 (pAb 122) is available conjugated to agarose (sc-56182 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56182 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56182 PE), fluorescein (sc-56182 FITC), Alexa Fluor® 488 (sc-56182 AF488), Alexa Fluor® 546 (sc-56182 AF546), Alexa Fluor® 594 (sc-56182 AF594) or Alexa Fluor® 647 (sc-56182 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56182 AF680) or Alexa Fluor® 790 (sc-56182 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

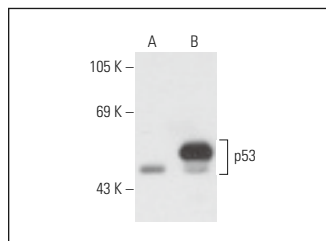
p53 (pAb 122) is recommended for detection of a conserved, denaturation-resistant determinant of the p53 protein of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for p53 siRNA (h): sc-29435, p53 siRNA (m): sc-29436, p53 siRNA (r): sc-45917, p53 shRNA Plasmid (h): sc-29435-SH, p53 shRNA Plasmid (m): sc-29436-SH, p53 shRNA Plasmid (r): sc-45917-SH, p53 shRNA (h) Lentiviral Particles: sc-29435-V, p53 shRNA (m) Lentiviral Particles: sc-29436-V and p53 shRNA (r) Lentiviral Particles: sc-45917-V.

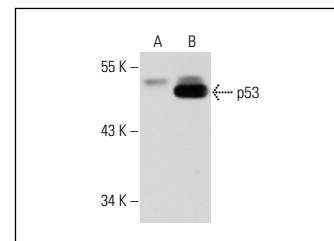
Molecular Weight of p53: 53 kDa.

STORAGE

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

DATA

p53 (pAb 122): sc-56182. Western blot analysis of p53 expression in non-transfected: sc-117752 (A) and human p53 transfected: sc-158802 (B) 293T whole cell lysates.



p53 (pAb 122): sc-56182. Western blot analysis of p53 expression in non-transfected: sc-117752 (A) and mouse p53 transfected: sc-125766 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

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- Gopal, K., et al. 2015. Attrition of hepatic damage inflicted by Angiotensin II with α -tocopherol and β -carotene in experimental apolipoprotein E knock-out mice. *Sci. Rep.* 5: 18300.
- da Mota, M.F., et al. 2018. LQFM030 reduced Ehrlich ascites tumor cell proliferation and VEGF levels. *Life Sci.* 201: 1-8.
- Vikramdeo, K.S., et al. 2020. Hyaluronan-binding protein 1 (HABP1) overexpression triggers induction of senescence in fibroblasts cells. *Cell Biol. Int.* 44: 1312-1330.
- Gao, Y., et al. 2021. Nuclear translocation of the receptor tyrosine kinase c-MET reduces the treatment efficacies of olaparib and gemcitabine in pancreatic ductal adenocarcinoma cells. *Am. J. Cancer Res.* 11: 236-250.
- Asenjo-Bueno, A., et al. 2024. Respiratory dysfunction in old mice could be related to inflammation and lung fibrosis induced by hyperphosphatemia. *Eur. J. Clin. Invest.* 54: e14302.

RESEARCH USE

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