

p53 (C-11): sc-55476



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 (C-11) is a mouse monoclonal antibody raised against amino acids 1-393 representing full length p53 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p53 (C-11) is available conjugated to agarose (sc-55476 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55476 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55476 PE), fluorescein (sc-55476 FITC), Alexa Fluor® 488 (sc-55476 AF488), Alexa Fluor® 546 (sc-55476 AF546), Alexa Fluor® 594 (sc-55476 AF594) or Alexa Fluor® 647 (sc-55476 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55476 AF680) or Alexa Fluor® 790 (sc-55476 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

p53 (C-11) is recommended for detection of p53 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

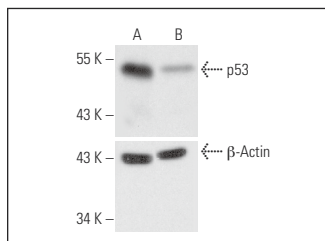
Suitable for use as control antibody for p53 siRNA (h): sc-29435, p53 siRNA (m): sc-29436, p53 siRNA (r): sc-45917, p53 shRNA Plasmid (h): sc-29435-SH, p53 shRNA Plasmid (m): sc-29436-SH, p53 shRNA Plasmid (r): sc-45917-SH, p53 shRNA (h) Lentiviral Particles: sc-29435-V, p53 shRNA (m) Lentiviral Particles: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

Molecular Weight of p53: 53 kDa.

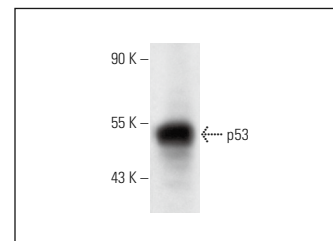
STORAGE

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

DATA



p53 Double Nickase Plasmid (h): sc-416469-NIC. Western blot analysis of p53 expression in non-transfected control (A) and p53 Double Nickase Plasmid transfected (B) HEK293T whole cell lysates. Blot probed with p53 (C-11): sc-55476. β-Actin (C4): sc-47778 used as specificity and loading control.



p53 (C-11): sc-55476. Western blot analysis of p53 expression in A-431 whole cell lysate.

SELECT PRODUCT CITATIONS

- Li, G.Y., et al. 2009. Acute energy reduction induces caspase-dependent apoptosis and activates p53 in retinal ganglion cells (RGC-5). *Exp. Eye Res.* 89: 581-589.
- Han, L., et al. 2013. Characterization of the mechanism of inhibin α -subunit gene in mouse anterior pituitary cells by RNA interference. *PLoS ONE* 8: e74596.
- Ronghe, A., et al. 2014. Differential regulation of estrogen receptors α and β by 4-(E)-(4-hydroxyphenylimino)-methylbenzene,1,2-diol, a novel resveratrol analog. *J. Steroid Biochem. Mol. Biol.* 144: 500-512.
- Suo, H., et al. 2015. Induction of apoptosis in HCT-116 colon cancer cells by polysaccharide of *Larimichthys crocea* swim bladder. *Oncol. Lett.* 9: 972-978.
- Bober, J., et al. 2016. Identification of new FGF1 binding partners-implications for its intracellular function. *IUBMB Life* 68: 242-251.
- Wang, Y., et al. 2017. 3-hydroxyterphenyllin, a natural fungal metabolite, induces apoptosis and S phase arrest in human ovarian carcinoma cells. *Int. J. Oncol.* 50: 1392-1402.
- Xu, B., et al. 2018. Effects of harmaline on cell growth of human liver cancer through the p53/p21 and Fas/FasL signaling pathways. *Oncol. Lett.* 15: 1931-1936.
- Rezaee, Z., et al. 2019. The effect of preventive exercise on the neuroprotection in 6-hydroxydopamine-lesioned rat brain. *Appl. Physiol. Nutr. Metab.* 44: 1267-1275.
- Li, F.S., et al. 2020. BMP9 mediates the anticancer activity of evodiamine through HIF-1 α /p53 in human colon cancer cells. *Oncol. Rep.* 43: 415-426.

RESEARCH USE

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