

p53 (D-11): sc-17846



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 (D-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 (D-11) is available conjugated to agarose (sc-17846 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17846 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17846 PE), fluorescein (sc-17846 FITC), Alexa Fluor® 488 (sc-17846 AF488), Alexa Fluor® 546 (sc-17846 AF546), Alexa Fluor® 594 (sc-17846 AF594) or Alexa Fluor® 647 (sc-17846 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17846 AF680) or Alexa Fluor® 790 (sc-17846 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

p53 (D-11) is recommended for detection of p53 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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.

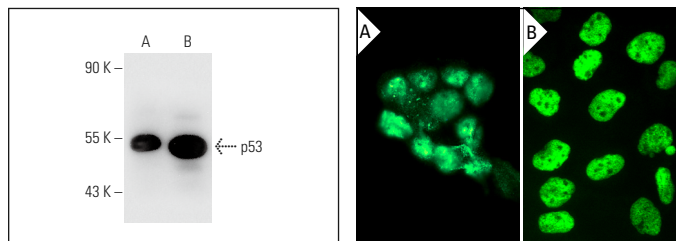
Molecular Weight of p53: 53 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, A549 cell lysate: sc-2413 or p53 (m): 293T Lysate: sc-125766.

STORAGE

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

DATA



p53 (D-11): sc-17846. Western blot analysis of p53 expression in non-transfected: sc-117752 (A) and mouse p53 transfected: sc-125766 (B) 293T whole cell lysates.

p53 (D-11): sc-17846. Immunofluorescence staining of methanol-fixed A-431 cells showing nuclear localization (A, B).

SELECT PRODUCT CITATIONS

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- Feldman, D.E., et al. 2013. The TBC1D15 oncoprotein controls stem cell self-renewal through destabilization of the Numb-p53 complex. *PLoS ONE* 8: e57312.
- Miyazawa, N., et al. 2014. Human cell growth regulator Ly-1 antibody reactive homologue accelerates processing of preribosomal RNA. *Genes Cells* 19: 273-286.
- Cai, B., et al. 2016. Convergent synthesis of novel muramyl dipeptide analogues: inhibition of *Porphyromonas gingivalis*-induced pro-inflammatory effects by high doses of muramyl dipeptide. *J. Med. Chem.* 59: 6878-6890.
- Perez-Ternero, C., et al. 2017. Food supplementation with rice bran enzymatic extract prevents vascular apoptosis and atherogenesis in ApoE^{-/-} mice. *Eur. J. Nutr.* 56: 225-236.
- Zhou, W., et al. 2018. Doxorubicin combined with Notch1-targeting siRNA for the treatment of gastric cancer. *Oncol. Lett.* 16: 2805-2812.
- Derech-Haim, S., et al. 2020. p53 regulates its own expression by an intrinsic exonuclease activity through AU-rich elements. *J. Mol. Med.* 98: 437-449.
- Schuller, S., et al. 2022. HELLS is negatively regulated by wild-type p53 in liver cancer by a mechanism involving P21 and FOXM1. *Cancers* 14: 459.

RESEARCH USE

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

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