SANTA CRUZ BIOTECHNOLOGY, INC.

p53 (2B2.68): sc-71817

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

p53 (2B2.68) is a mouse monoclonal antibody raised against amino acids 11-25 of p53 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-71817 X, 200 µg/0.1 ml.

p53 (2B2.68) is available conjugated to agarose (sc-71817 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-71817 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-71817 PE) or fluorescein (sc-71817 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

In addition, p53 (2B2.68) is available conjugated to TRITC (sc-71817 TRITC, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

p53 (2B2.68) is recommended for detection of wild type and mutant p53 under denaturing and non-denaturing conditions of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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.

p53 (2B2.68) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of p53: 53 kDa.

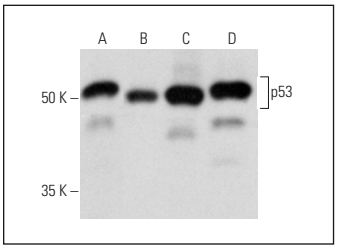
RESEARCH USE

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

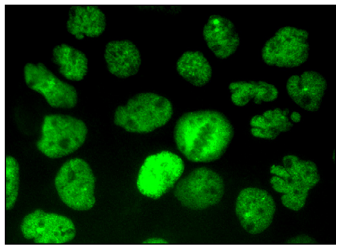
STORAGE

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

DATA



p53 (2B2.68) HRP: sc-71817 HRP. Direct western blot analysis of p53 expression in A-431 (**A**), HCT-116 (**B**), MDA-MB-231 (**C**) and T-47D (**D**) whole cell lysates.



p53 (2B2.68): sc-71817. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Veldurthy, A., et al. 2008. The kinase inhibitor dasatinib induces apoptosis in chronic lymphocytic leukemia cells *in vitro* with preference for a subgroup of patients with unmutated IgV_H genes. Blood 112: 1443-1452.
2. Roudkenar, M.H., et al. 2009. Lipocalin 2 regulation by thermal stresses: protective role of Lcn2/NGAL against cold and heat stresses. Exp. Cell Res. 315: 3140-3151.
3. Farmaki, E., et al. 2011. ERp29 regulates response to doxorubicin by a PERK-mediated mechanism. Biochim. Biophys. Acta 1813: 1165-1171.
4. Nakatsuka, A., et al. 2012. RXR antagonism induces G_0/G_1 cell cycle arrest and ameliorates obesity by up-regulating the p53-$p21^{Cip1}$ pathway in adipocytes. J. Pathol. 226: 784-795.
5. Harashima, N., et al. 2014. Transfection of poly(I:C) can induce reactive oxygen species-triggered apoptosis and interferon-β-mediated growth arrest in human renal cell carcinoma cells via innate adjuvant receptors and the 2-5A system. Mol. Cancer 13: 217.
6. Nakatsuka, A., et al. 2016. Insufficiency of phosphatidylethanolamine N-methyltransferase is risk for lean non-alcoholic steatohepatitis. Sci. Rep. 6: 21721.
7. Busch, M., et al. 2017. Reduction of the tumorigenic potential of human retinoblastoma cell lines by TFF1 overexpression involves p53/caspase signaling and miR-18a regulation. Int. J. Cancer 141: 549-560.
8. He, T., et al. 2018. Post-transcriptional regulation of PIAS3 expression by miR-18a in malignant mesothelioma. Mol. Oncol. 12: 2124-2135.
9. Zhou, J., et al. 2019. MicroRNA-26a targets the mdm2/p53 loop directly in response to liver regeneration. Int. J. Mol. Med. 44: 1505-1514.

CONJUGATES

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.