SANTA CRUZ BIOTECHNOLOGY, INC.

p-p53 (Ser 392): sc-7997

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 can assemble into tetramers in the absence of DNA, 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) (amino acids 110-286) of p53 can compromise energetically favorable association with *cis* elements and are implicated in several human cancers. Phosphorylation of p53 at residue Thr 155 is mediated by the COP9 signalosome (CSN) and targets p53 to ubiquitin-26S Proteasome-dependent degradation.

CHROMOSOMAL LOCATION

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

SOURCE

p-p53 (Ser 392) is available as either goat (sc-7997) or rabbit (sc-7997-R) affinity purified polyclonal antibody raised against a short amino acid sequence containing Ser 392 phosphorylated p53 of human origin.

PRODUCT

Each vial contains either 100 µg (sc-7997) or 200 µg (sc-7997-R) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7997 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA). Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-7997 X, 200 µg/0.1 ml.

APPLICATIONS

p-p53 (Ser 392) is recommended for detection of Ser 392 phosphorylated p53 of human origin and Ser 389 phosphorylated p53 of mouse 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). p-p53 (Ser 392) is also recommended for detection of correspondingly phosphorylated p53 in additional species, including equine, canine, bovine and porcine.

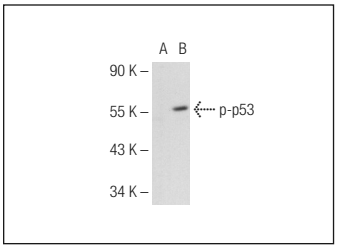
Suitable for use as control antibody for p53 siRNA (h): sc-29435, p53 siRNA (m): sc-29436, p53 shRNA Plasmid (h): sc-29435-SH, p53 shRNA Plasmid (m): sc-29436-SH, p53 shRNA (h) Lentiviral Particles: sc-29435-V and p53 shRNA (m) Lentiviral Particles: sc-29436-V.

Molecular Weight of p-p53: 53 kDa.

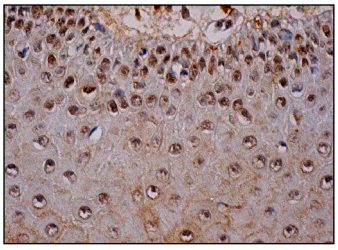
STORAGE

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

DATA



p-p53 (Ser 392): sc-7997. Western blot analysis of p53 phosphorylation in non-transfected: sc-117752 (**A**) and human p53 transfected: sc-158802 (**B**) 293T whole cell lysates.



p-p53 (Ser 392): sc-7997. Immunoperoxidase staining of formalin fixed, paraffin-embedded oral mucosa tissue showing nuclear, cytoplasmic and membrane staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Dagon, Y., et al. 2001. Double-stranded RNA-dependent protein kinase, PKR, down-regulates Cdc2/cyclin B1 and induces apoptosis in non-transformed but not in v-Mos transformed cells. Oncogene 20: 8045-8056.
2. Cheng, Y., et al. 2008. ERK and JNK mediate TNFalpha-induced p53 activation in apoptotic and autophagic L929 cell death. Biochem. Biophys. Res. Commun. 376: 483-488.
3. Li, L., et al. 2008. The activation of p53 mediated by Epstein-Barr virus latent membrane protein 1 in SV40 large T-antigen transformed cells. FEBS Lett. 582: 755-762.
4. Warnock, L.J., et al. 2008. Crosstalk between site-specific modifications on p53 and Histone H3. Oncogene 27: 1639-1644.
5. Liu, B., et al. 2009. Polygonatum cyrtonema lectin induces apoptosis and autophagy in human melanoma A375 cells through a mitochondria-mediated ROS-p38-p53 pathway. Cancer Lett. 275: 54-60.
6. Zajkowicz, A., et al. 2011. The activation of the p53 pathway by the AMP mimetic AICAR is reduced by inhibitors of the ATM or mTOR kinases. Mech. Ageing Dev. 132: 543-551.
7. Luo, X.J., et al. 2011. Grifolin, a potent antitumour natural product upregulates death-associated protein kinase 1 DAPK1 via p53 in nasopharyngeal carcinoma cells. Eur. J. Cancer 47: 316-325.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **p-p53 (FP3.2): sc-51690** or **p-p53 (5G176): sc-71785**, our highly recommended monoclonal alternatives to p-p53 (Ser 392).