

p53 Antibody (S315)

Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
 Catalog # AP6266H-400 □

Specification

p53 Antibody (S315) - Product info

Application	IHC-P, IF, WB
Primary Accession	P04637
Other Accession	P56423
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	43653

p53 Antibody (S315) - Additional info

Gene ID 7157

Other Names

Cellular tumor antigen p53, Antigen NY-CO-13, Phosphoprotein p53, Tumor suppressor p53, TP53, P53

Target/Specificity

This p53 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 293-322 amino acids from human p53.

Dilution

WB~~1:1000
 IHC-P~~1:10~50
 IF~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

p53 Antibody (S315) is for research use only and not for use in diagnostic or therapeutic procedures.

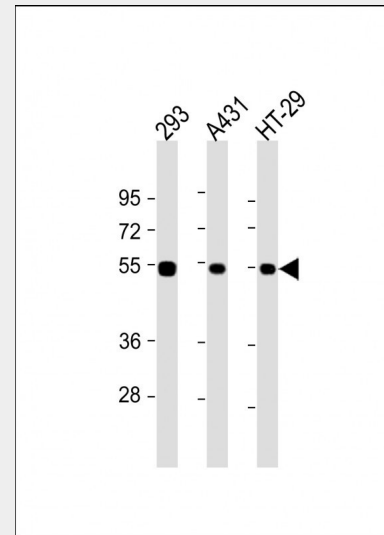
p53 Antibody (S315) - Protein Information

Name TP53

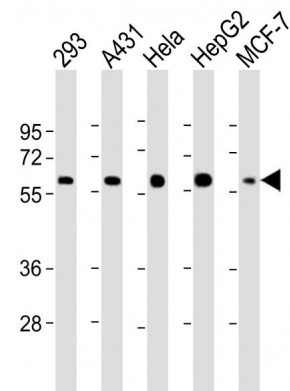
Synonyms P53

Function

Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological



All lanes : Anti-p53 Antibody (S315) at 1:2000 dilution Lane 1: 293 whole cell lysate Lane 2: A431 whole cell lysate Lane 3: HT-29 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDm/TBST.



All lanes : Anti-p53 Antibody (S315) at 1:2000 dilution Lane 1: 293 whole cell lysate Lane 2: A431 whole cell lysate Lane 3: HeLa whole cell lysate Lane 4: HepG2 whole cell lysate Lane 5: MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane.

circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of BAX and FAS antigen expression, or by repression of Bcl-2 expression. In cooperation with mitochondrial PPIF is involved in activating oxidative stress-induced necrosis; the function is largely independent of transcription. Induces the transcription of long intergenic non-coding RNA p21 (lincRNA-p21) and lincRNA- Mkn1. LincRNA-p21 participates in TP53-dependent transcriptional repression leading to apoptosis and seems to have an effect on cell-cycle regulation. Implicated in Notch signaling cross-over. Prevents CDK7 kinase activity when associated to CAK complex in response to DNA damage, thus stopping cell cycle progression. Isoform 2 enhances the transactivation activity of isoform 1 from some but not all TP53-inducible promoters. Isoform 4 suppresses transactivation activity and impairs growth suppression mediated by isoform 1. Isoform 7 inhibits isoform 1-mediated apoptosis. Regulates the circadian clock by repressing CLOCK-ARNTL/BMAL1- mediated transcriptional activation of PER2 (PubMed:24051492).

Cellular Location

Cytoplasm. Nucleus. Nucleus, PML body. Endoplasmic reticulum. Mitochondrion matrix. Note=Interaction with BANP promotes nuclear localization. Recruited into PML bodies together with CHEK2. Translocates to mitochondria upon oxidative stress. Translocates to mitochondria in response to mitomycin C treatment (PubMed:27323408). Isoform 2: Nucleus. Cytoplasm. Note=Localized mainly in the nucleus with minor staining in the cytoplasm Isoform 4: Nucleus. Cytoplasm. Note=Predominantly nuclear but translocates to the cytoplasm following cell stress Isoform 8: Nucleus. Cytoplasm. Note=Localized in both nucleus and cytoplasm in most cells. In some cells, forms foci in the nucleus that are different from nucleoli

Tissue Location

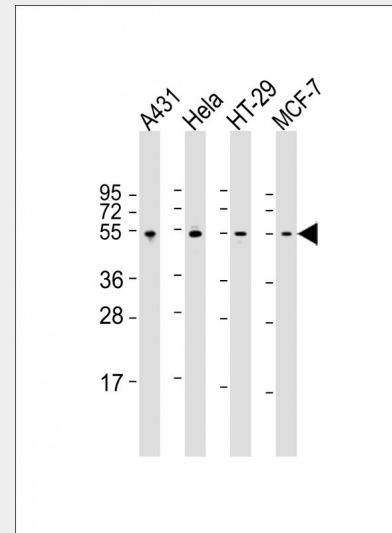
Ubiquitous. Isoforms are expressed in a wide range of normal tissues but in a tissue-dependent manner. Isoform 2 is expressed in most normal tissues but is not detected in brain, lung, prostate, muscle, fetal brain, spinal cord and fetal liver. Isoform 3 is expressed in most normal tissues but is not detected in lung, spleen, testis, fetal brain, spinal cord and fetal liver. Isoform 7 is expressed in most normal tissues but is not detected in prostate, uterus, skeletal muscle and breast Isoform 8 is detected only in colon, bone marrow, testis, fetal brain and intestine. Isoform 9 is expressed in most normal tissues but is not detected in brain, heart, lung, fetal liver, salivary gland, breast or intestine.

p53 Antibody (S315) - Protocols

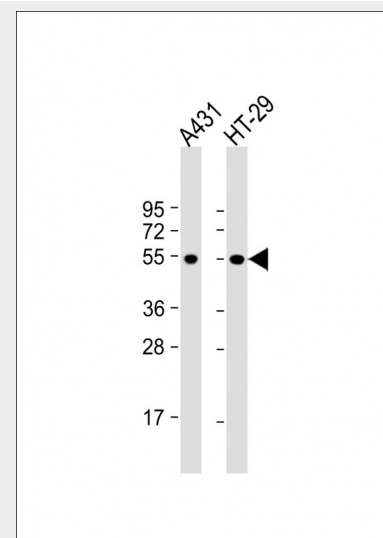
Provided below are standard protocols that you may find useful for product applications.

- [□ Western Blot](#)
- [□ Blocking Peptides](#)
- [□ Dot Blot](#)
- [□ Immunohistochemistry](#)
- [□ Immunofluorescence](#)
- [□ Immunoprecipitation](#)
- [□ Flow Cytometry](#)
- [□ Cell Culture](#)

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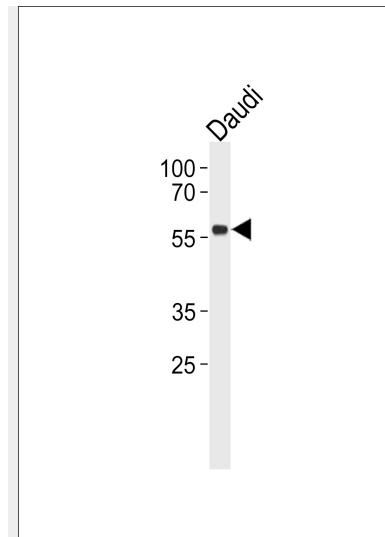
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p53 Antibody (S315) - Background

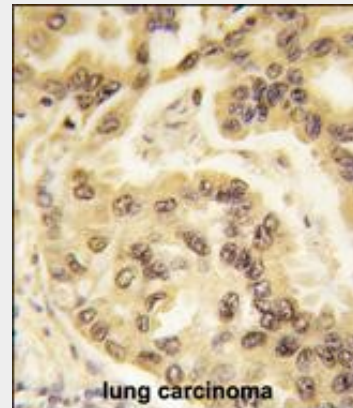
Tumor protein p53, a nuclear protein, plays an essential role in the regulation of cell cycle, specifically in the transition from G0 to G1. It is found in very low levels in normal cells, however, in a variety of transformed cell lines, it is expressed in high amounts, and believed to contribute to transformation and malignancy. p53 is a DNA-binding protein containing DNA-binding, oligomerization and transcription activation domains. It is postulated to bind as a tetramer to a p53-binding site and activate expression of downstream genes that inhibit growth and/or invasion, and thus function as a tumor suppressor. Mutants of p53 that frequently occur in a number of different human cancers fail to bind the consensus DNA binding site, and hence cause the loss of tumor suppressor activity. Alterations of the TP53 gene occur not only as somatic mutations in human malignancies, but also as germline mutations in some cancer-prone families with Li-Fraumeni syndrome.

p53 Antibody (S315) - References

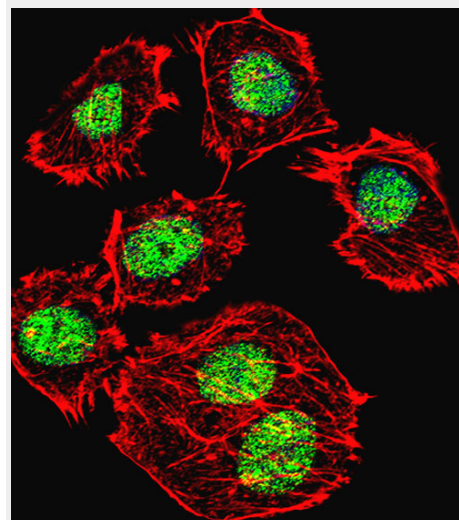
Blanchette, P., et al., *Mol. Cell. Biol.* 24(21):9619-9629 (2004).
Adachi, K., et al., *Oncogene* 23(47):7791-7798 (2004). Zhang, Y., et al., *J. Biol. Chem.* 279(41):42545-42551 (2004). Anazawa, Y., et al., *Oncogene* 23(46):7621-7627 (2004). Montagnoli, A., et al., *Cancer Res.* 64(19):7110-7116 (2004).



p53 Antibody (S315) (Cat. #AP6266h) western blot analysis in Daudi cell line lysates (35ug/lane). This demonstrates the p53 antibody detected the p53 protein (arrow).



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with p53 Antibody (S315) (Cat.#AP6266h), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Fluorescent confocal image of U251 cell

stained with p53 Antibody (S315)(Cat#AP6266h).U251 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with p53 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). p53 immunoreactivity is localized to Nucleus significantly.