

# p53 Antibody

Rabbit mAb

Catalog # AP90189

## Product Information

<b>Application</b>	WB, IHC, IF, ICC, IP, IHF
<b>Primary Accession</b>	<a href="#">P04637</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	Cellular tumor antigen p53; Phosphoprotein p53; TP53; Tumor suppressor p53;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	43653

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human p53
<b>Description</b>	Plays an essential role in the regulation of cell cycle, specifically in the transition from G0 to G1. 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.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

<b>Name</b>	TP53
<b>Synonyms</b>	P53
<b>Function</b>	Multifunctional transcription factor that induces cell cycle arrest, DNA repair or apoptosis upon binding to its target DNA sequence (PubMed: <a href="#">11025664</a> , PubMed: <a href="#">12524540</a> , PubMed: <a href="#">12810724</a> , PubMed: <a href="#">15186775</a> , PubMed: <a href="#">15340061</a> , PubMed: <a href="#">17317671</a> , PubMed: <a href="#">17349958</a> , PubMed: <a href="#">19556538</a> , PubMed: <a href="#">20673990</a> , PubMed: <a href="#">20959462</a> , PubMed: <a href="#">22726440</a> , PubMed: <a href="#">24051492</a> , PubMed: <a href="#">24652652</a> , PubMed: <a href="#">35618207</a> , PubMed: <a href="#">36634798</a> , PubMed: <a href="#">38653238</a> , PubMed: <a href="#">9840937</a> ). Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type (PubMed: <a href="#">11025664</a> , PubMed: <a href="#">12524540</a> , PubMed: <a href="#">12810724</a> ,

PubMed:[15186775](#), PubMed:[15340061](#), PubMed:[17189187](#), PubMed:[17317671](#), PubMed:[17349958](#), PubMed:[19556538](#), PubMed:[20673990](#), PubMed:[20959462](#), PubMed:[22726440](#), PubMed:[24051492](#), PubMed:[24652652](#), PubMed:[38653238](#), PubMed:[9840937](#)). Negatively regulates cell division by controlling expression of a set of genes required for this process (PubMed:[11025664](#), PubMed:[12524540](#), PubMed:[12810724](#), PubMed:[15186775](#), PubMed:[15340061](#), PubMed:[17317671](#), PubMed:[17349958](#), PubMed:[19556538](#), PubMed:[20673990](#), PubMed:[20959462](#), PubMed:[22726440](#), PubMed:[24051492](#), PubMed:[24652652](#), PubMed:[9840937](#)). 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 (PubMed:[12524540](#), PubMed:[17189187](#)). Its pro-apoptotic activity is activated via its interaction with PPP1R13B/ASPP1 or TP53BP2/ASPP2 (PubMed:[12524540](#)). However, this activity is inhibited when the interaction with PPP1R13B/ASPP1 or TP53BP2/ASPP2 is displaced by PPP1R13L/iASPP (PubMed:[12524540](#)). 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-Mkln1. 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-BMAL1-mediated transcriptional activation of PER2 (PubMed:[24051492](#)).

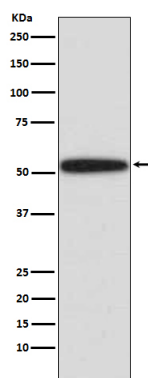
## Cellular Location

Cytoplasm. Nucleus. Nucleus, PML body. Endoplasmic reticulum. Mitochondrion matrix. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Note=Recruited into PML bodies together with CHEK2 (PubMed:[12810724](#)) Translocates to mitochondria upon oxidative stress (PubMed:[22726440](#)) Translocates to mitochondria in response to mitomycin C treatment (PubMed:[27323408](#)). Competitive inhibition of TP53 interaction with HSPA9/MOT-2 by UBXN2A results in increased protein abundance and subsequent translocation of TP53 to the nucleus (PubMed:[24625977](#)) [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

## Images



Western blot analysis of p53 expression in T47D cell lysate.

Image not found : 202311/AP90189-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human colon cancer, using p53 Antibody.

Image not found : 202311/AP90189-IF.jpg

Immunofluorescent analysis of Hela cells, using p53 Antibody .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.