

p53 Antibody (Clone C6A5)
Mouse Monoclonal Antibody
Catalog # ABV10027

Specification

p53 Antibody (Clone C6A5) - Product Information

Application	WB
Primary Accession	P04637
Other Accession	EAW90140
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	43653

p53 Antibody (Clone C6A5) - Additional Information

Gene ID 7157

Application & Usage	Western blotting (0.5-4 µg/ml), immunoprecipitation (4-8 µg/ml), Immunohistochemistry (4-8 µg/ml), immunocytochemistry (4-8 µg/ml). However, the optimal conditions should be determined individually.
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Other Names

TP53, TRP53, P53, LFS1, Tumor suppressor p53, Phosphoprotein p53

Target/Specificity

p53

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) in PBS containing 1 mg/ml BSA and 1.5 mM sodium azide and 50% glycerol.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

p53 Antibody (Clone C6A5) is for research use only and not for use in diagnostic or therapeutic procedures.

p53 Antibody (Clone C6A5) - Protein Information

Name TP53

Synonyms P53

Function

Multifunctional transcription factor that induces cell cycle arrest, DNA repair or apoptosis upon binding to its target DNA sequence (PubMed: [11025664](http://www.uniprot.org/citations/11025664) target="_blank">11025664, PubMed: [12524540](http://www.uniprot.org/citations/12524540) target="_blank">12524540, PubMed: [12810724](http://www.uniprot.org/citations/12810724) target="_blank">12810724, PubMed: [15186775](http://www.uniprot.org/citations/15186775) target="_blank">15186775, PubMed: [15340061](http://www.uniprot.org/citations/15340061) target="_blank">15340061, PubMed: [17317671](http://www.uniprot.org/citations/17317671) target="_blank">17317671, PubMed: [17349958](http://www.uniprot.org/citations/17349958) target="_blank">17349958, PubMed: [19556538](http://www.uniprot.org/citations/19556538) target="_blank">19556538, PubMed: [20673990](http://www.uniprot.org/citations/20673990) target="_blank">20673990, PubMed: [20959462](http://www.uniprot.org/citations/20959462) target="_blank">20959462, PubMed: [22726440](http://www.uniprot.org/citations/22726440) target="_blank">22726440, PubMed: [24051492](http://www.uniprot.org/citations/24051492) target="_blank">24051492, PubMed: [24652652](http://www.uniprot.org/citations/24652652) target="_blank">24652652, PubMed: [35618207](http://www.uniprot.org/citations/35618207) target="_blank">35618207, PubMed: [36634798](http://www.uniprot.org/citations/36634798) target="_blank">36634798, PubMed: [38653238](http://www.uniprot.org/citations/38653238) target="_blank">38653238, PubMed: [9840937](http://www.uniprot.org/citations/9840937) target="_blank">9840937). Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type (PubMed: [11025664](http://www.uniprot.org/citations/11025664) target="_blank">11025664, PubMed: [12524540](http://www.uniprot.org/citations/12524540) target="_blank">12524540, PubMed: [12810724](http://www.uniprot.org/citations/12810724) target="_blank">12810724, PubMed: [15186775](http://www.uniprot.org/citations/15186775) target="_blank">15186775, PubMed: [15340061](http://www.uniprot.org/citations/15340061) target="_blank">15340061, PubMed: [17189187](http://www.uniprot.org/citations/17189187) target="_blank">17189187, PubMed: [17317671](http://www.uniprot.org/citations/17317671) target="_blank">17317671, PubMed: [17349958](http://www.uniprot.org/citations/17349958) target="_blank">17349958, PubMed: [19556538](http://www.uniprot.org/citations/19556538) target="_blank">19556538, PubMed: [20673990](http://www.uniprot.org/citations/20673990) target="_blank">20673990, PubMed: [20959462](http://www.uniprot.org/citations/20959462) target="_blank">20959462, PubMed: [22726440](http://www.uniprot.org/citations/22726440) target="_blank">22726440, PubMed: [24051492](http://www.uniprot.org/citations/24051492) target="_blank">24051492, PubMed: [24652652](http://www.uniprot.org/citations/24652652) target="_blank">24652652, PubMed: [38653238](http://www.uniprot.org/citations/38653238) target="_blank">38653238, PubMed: [9840937](http://www.uniprot.org/citations/9840937) target="_blank">9840937). Negatively regulates cell division by controlling expression of a set of genes required for this process (PubMed: [11025664](http://www.uniprot.org/citations/11025664) target="_blank">11025664, PubMed: [12524540](http://www.uniprot.org/citations/12524540) target="_blank">12524540, PubMed: [12810724](http://www.uniprot.org/citations/12810724) target="_blank">12810724, PubMed: [15186775](http://www.uniprot.org/citations/15186775) target="_blank">15186775, PubMed: [15340061](http://www.uniprot.org/citations/15340061) target="_blank">15340061, PubMed: [17317671](http://www.uniprot.org/citations/17317671) target="_blank">17317671, PubMed: [17349958](http://www.uniprot.org/citations/17349958) target="_blank">17349958, PubMed: [19556538](http://www.uniprot.org/citations/19556538) target="_blank">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-Mkl1. 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

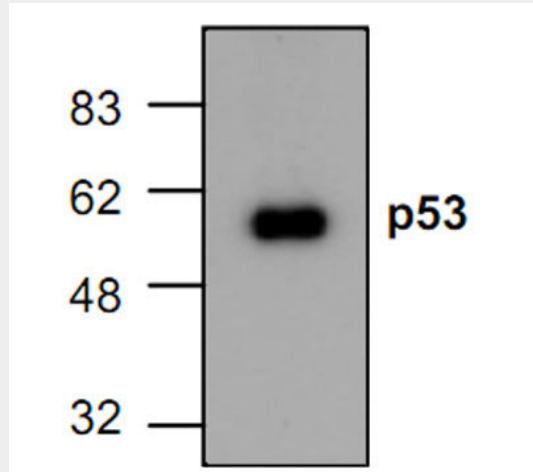
p53 Antibody (Clone C6A5) - Protocols

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](#)

p53 Antibody (Clone C6A5) - Images



Western blot analysis of p53 in Cos cell lysate.

p53 Antibody (Clone C6A5) - Background

p53, a 53 kDa protein, binds to a DNA consensus sequence, the p53 response element, and regulates normal cell cycle events by activating transcription of genes involved either in progression through the cell cycle, or causing arrest in G1 when the genome is damaged. In most transformed and tumor cells the concentration of p53 is increased 5-1000 fold over the concentration in normal cells, principally due to the increased half-life (4 hrs) compared to that of wild-type (20 min). p53 localizes in the nucleus, but is detectable at the plasma membrane during mitosis and certain mutations also modulate cytoplasmic/nuclear distribution. p53 downregulates Bcl-2 expression and upregulates Bax expression, but may not always be necessary for apoptosis.