10320 Camino Santa Fe, Suite G San Diego, CA 92121 Tel: 858.875.1900 Fax: 858.875.1999



# p53 (acetyl K382) Antibody

Rabbit mAb Catalog # AP90542

### **Product Information**

**Application** WB, IHC, IF, ICC, IHF

Primary Accession P04637
Reactivity Human
Clonality Monoclonal

Other Names Antigen NY-CO-13, Cellular tumor antigen p53, Phosphoprotein p53, TP53,

Tumor suppressor p53

IsotypeRabbit IgGHostRabbitCalculated MW43653

#### **Additional Information**

**Dilution** WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:100

**Purification** Affinity-chromatography

**Immunogen** A synthesized peptide derived from human p53 (acetyl K382)

**Description** Acts as a tumor suppressor in many tumor types; induces growth arrest or

apoptosis depending on the physiological 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.

Storage Condition and Buffer 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**

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,

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: 35618207, PubMed: 36634798, PubMed: 38653238,

PubMed: 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, PubMed: 12524540, PubMed: 12810724, 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).

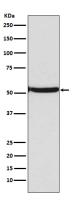
#### **Cellular Location**

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 (acetyl K382) expression in Jurkat cell lysate treated with etopside and TSA.

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