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# Mutant p53 Rabbit mAb

Catalog # AP77384

## **Product Information**

**Application** WB, IF, FC, ICC, IP

Primary Accession P04637
Reactivity Human
Rabbit

**Clonality** Monoclonal Antibody

**Isotype** IgG

**Conjugate** Unconjugated

**Immunogen** A synthesized peptide derived from human p53

**Purification** Affinity Chromatography

Calculated MW 43653

## **Additional Information**

**Gene ID** 7157

Other Names TP53

**Dilution** WB~~1/500-1/1000 IF~~1:50~200 FC~~1:10~50 ICC~~N/A IP~~N/A

Format Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02%

sodium azide and 50% glycerol.

**Storage** Store at 4°C short term. Aliquot and store at -20°C long term. Avoid

freeze/thaw cycles.

### **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: <u>9840937</u>). 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:<u>15186775</u>, PubMed:<u>15340061</u>, PubMed:<u>17189187</u>, PubMed:<u>17317671</u>, PubMed:<u>17349958</u>, PubMed:<u>19556538</u>,

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).

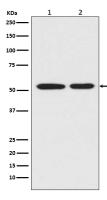
#### **Cellular Location**

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**



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