

**KO-Validated Anti-Tumor Protein P53 Rabbit Polyclonal Antibody**  
**Rabbit polyclonal antibody**  
**Catalog # AGI2404****Specification****KO-Validated Anti-Tumor Protein P53 Rabbit Polyclonal Antibody - Product Information**

|                   |                                                                                                                                                                                                                                                                                               |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application       | WB                                                                                                                                                                                                                                                                                            |
| Primary Accession | <a href="#">P04637</a>                                                                                                                                                                                                                                                                        |
| Reactivity        | Rat, Human, Mouse                                                                                                                                                                                                                                                                             |
| Clonality         | Polyclonal                                                                                                                                                                                                                                                                                    |
| Isotype           | Rabbit IgG                                                                                                                                                                                                                                                                                    |
| Calculated MW     | Predicted, 44 kDa, observed, 50 kDa kDa                                                                                                                                                                                                                                                       |
| Gene Name         | TP53                                                                                                                                                                                                                                                                                          |
| Aliases           | TP53; Tumor Protein P53; P53; LFS1;<br>Cellular Tumor Antigen P53;<br>Phosphoprotein P53; Antigen NY-CO-13;<br>Transformation-Related Protein 53; Mutant<br>Tumor Protein 53; Li-Fraumeni Syndrome;<br>Tumor Suppressor P53; Tumor Suppressor<br>P53; Tumor Protein 53; BMFS5; TRP53;<br>BCC7 |
| Immunogen         | A synthesized peptide derived from human<br>p53                                                                                                                                                                                                                                               |

**KO-Validated Anti-Tumor Protein P53 Rabbit Polyclonal Antibody - Additional Information**

|                                                                                                   |      |
|---------------------------------------------------------------------------------------------------|------|
| Gene ID                                                                                           | 7157 |
| <b>Other Names</b>                                                                                |      |
| Cellular tumor antigen p53, Antigen NY-CO-13, Phosphoprotein p53, Tumor suppressor p53, TP53, P53 |      |

**KO-Validated Anti-Tumor Protein P53 Rabbit Polyclonal Antibody - 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</a>, PubMed: [12524540](http://www.uniprot.org/citations/12524540) target="\_blank">12524540</a>, PubMed: [12810724](http://www.uniprot.org/citations/12810724) target="\_blank">12810724</a>, PubMed: [15186775](http://www.uniprot.org/citations/15186775) target="\_blank">15186775</a>, PubMed: [15340061](http://www.uniprot.org/citations/15340061) target="\_blank">15340061</a>, PubMed: [17317671](http://www.uniprot.org/citations/17317671) target="\_blank">17317671</a>, PubMed: [17349958](http://www.uniprot.org/citations/17349958) target="\_blank">17349958</a>, PubMed: [19556538](http://www.uniprot.org/citations/19556538)

target="\_blank">19556538</a>, PubMed:<a href="http://www.uniprot.org/citations/20673990" target="\_blank">20673990</a>, PubMed:<a href="http://www.uniprot.org/citations/20959462" target="\_blank">20959462</a>, PubMed:<a href="http://www.uniprot.org/citations/22726440" target="\_blank">22726440</a>, PubMed:<a href="http://www.uniprot.org/citations/24051492" target="\_blank">24051492</a>, PubMed:<a href="http://www.uniprot.org/citations/24652652" target="\_blank">24652652</a>, PubMed:<a href="http://www.uniprot.org/citations/35618207" target="\_blank">35618207</a>, PubMed:<a href="http://www.uniprot.org/citations/36634798" target="\_blank">36634798</a>, PubMed:<a href="http://www.uniprot.org/citations/38653238" target="\_blank">38653238</a>, PubMed:<a href="http://www.uniprot.org/citations/9840937" target="\_blank">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="http://www.uniprot.org/citations/11025664" target="\_blank">11025664</a>, PubMed:<a href="http://www.uniprot.org/citations/12524540" target="\_blank">12524540</a>, PubMed:<a href="http://www.uniprot.org/citations/12810724" target="\_blank">12810724</a>, PubMed:<a href="http://www.uniprot.org/citations/15186775" target="\_blank">15186775</a>, PubMed:<a href="http://www.uniprot.org/citations/15340061" target="\_blank">15340061</a>, PubMed:<a href="http://www.uniprot.org/citations/17189187" target="\_blank">17189187</a>, PubMed:<a href="http://www.uniprot.org/citations/17317671" target="\_blank">17317671</a>, PubMed:<a href="http://www.uniprot.org/citations/17349958" target="\_blank">17349958</a>, PubMed:<a href="http://www.uniprot.org/citations/19556538" target="\_blank">19556538</a>, PubMed:<a href="http://www.uniprot.org/citations/20673990" target="\_blank">20673990</a>, PubMed:<a href="http://www.uniprot.org/citations/20959462" target="\_blank">20959462</a>, PubMed:<a href="http://www.uniprot.org/citations/22726440" target="\_blank">22726440</a>, PubMed:<a href="http://www.uniprot.org/citations/24051492" target="\_blank">24051492</a>, PubMed:<a href="http://www.uniprot.org/citations/24652652" target="\_blank">24652652</a>, PubMed:<a href="http://www.uniprot.org/citations/38653238" target="\_blank">38653238</a>, PubMed:<a href="http://www.uniprot.org/citations/9840937" target="\_blank">9840937</a>). Negatively regulates cell division by controlling expression of a set of genes required for this process (PubMed:<a href="http://www.uniprot.org/citations/11025664" target="\_blank">11025664</a>, PubMed:<a href="http://www.uniprot.org/citations/12524540" target="\_blank">12524540</a>, PubMed:<a href="http://www.uniprot.org/citations/12810724" target="\_blank">12810724</a>, PubMed:<a href="http://www.uniprot.org/citations/15186775" target="\_blank">15186775</a>, PubMed:<a href="http://www.uniprot.org/citations/15340061" target="\_blank">15340061</a>, PubMed:<a href="http://www.uniprot.org/citations/17317671" target="\_blank">17317671</a>, PubMed:<a href="http://www.uniprot.org/citations/17349958" target="\_blank">17349958</a>, PubMed:<a href="http://www.uniprot.org/citations/19556538" target="\_blank">19556538</a>, PubMed:<a href="http://www.uniprot.org/citations/20673990" target="\_blank">20673990</a>, PubMed:<a href="http://www.uniprot.org/citations/20959462" target="\_blank">20959462</a>, PubMed:<a href="http://www.uniprot.org/citations/22726440" target="\_blank">22726440</a>, PubMed:<a href="http://www.uniprot.org/citations/24051492" target="\_blank">24051492</a>, PubMed:<a href="http://www.uniprot.org/citations/24652652" target="\_blank">24652652</a>, PubMed:<a href="http://www.uniprot.org/citations/9840937" target="\_blank">9840937</a>). 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:<a href="http://www.uniprot.org/citations/12524540" target="\_blank">12524540</a>, PubMed:<a href="http://www.uniprot.org/citations/17189187" target="\_blank">17189187</a>). Its pro-apoptotic activity is activated via its interaction with PPP1R13B/ASPP1 or TP53BP2/ASPP2 (PubMed:<a href="http://www.uniprot.org/citations/12524540" target="\_blank">12524540</a>). However, this activity is inhibited when the interaction with PPP1R13B/ASPP1 or TP53BP2/ASPP2 is displaced by PPP1R13L/iASPP (PubMed:<a href="http://www.uniprot.org/citations/12524540" target="\_blank">12524540</a>). 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-BMAL1-mediated transcriptional activation of PER2 (PubMed:<a href="http://www.uniprot.org/citations/24051492" target="\_blank">24051492</a>).

#### **Cellular Location**

Cytoplasm. 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**

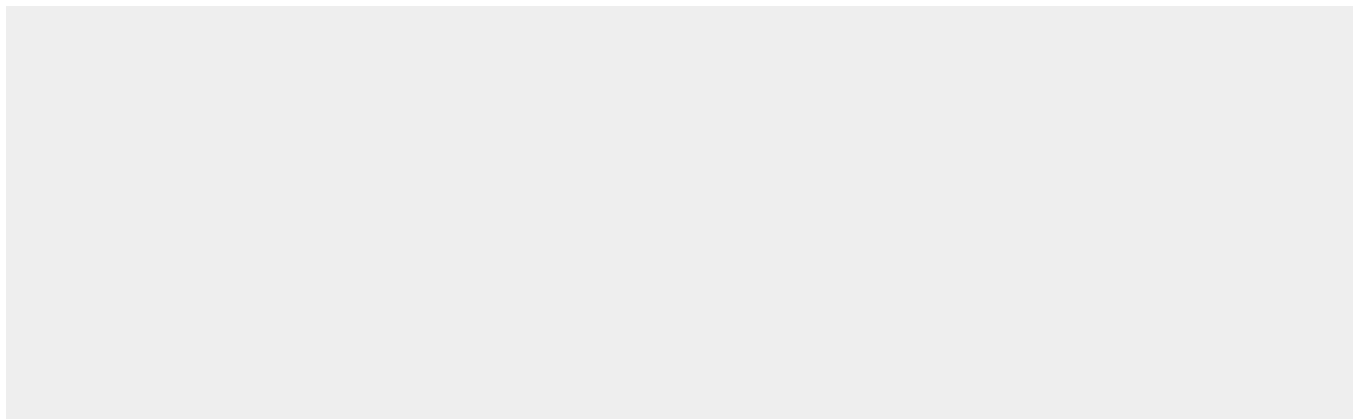
Ubiquitous. Isoforms are expressed in a wide range of normal tissues but in a tissue-dependent manner. Isoform 2 is expressed in most normal tissues but is not detected in brain, lung, prostate, muscle, fetal brain, spinal cord and fetal liver. Isoform 3 is expressed in most normal tissues but is not 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

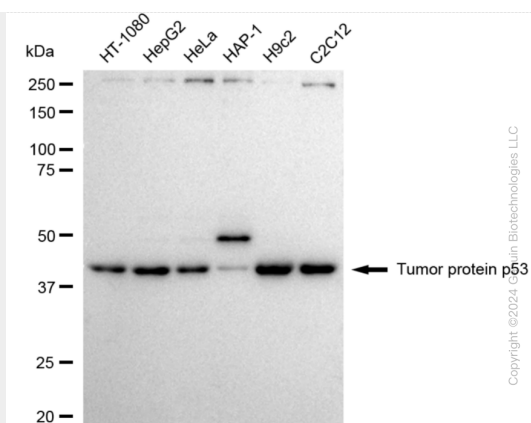
### **KO-Validated Anti-Tumor Protein P53 Rabbit Polyclonal Antibody - Protocols**

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

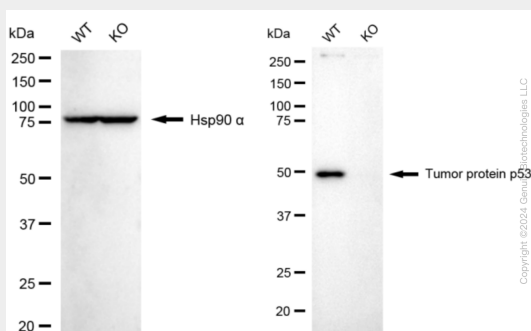
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **KO-Validated Anti-Tumor Protein P53 Rabbit Polyclonal Antibody - Images**





Western blotting analysis using anti-tumor protein p53 antibody (Cat#AGI2404). Total cell lysates (30  $\mu$ g) from HAP-1 cells were loaded and separated by SDS-PAGE. The blot was incubated with anti-tumor protein p53 antibody (Cat#AGI2404, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-tumor protein p53 antibody (Cat#AGI2404). Tumor protein p53 expression in wild type (WT) and tumor protein p53 (TP53) knockout (KO) HSHC cells with 20  $\mu$ g of total cell lysates. Hsp90  $\alpha$  serves as a loading control. The blot was incubated with anti-tumor protein p53 antibody (Cat#AGI2404, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.