Anti-p53 Antibody [JB42-26]

ET7107-33

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, FC, IP, IF-Cell, IF-Tissue
Molecular Wt:	Predicted band size: 53 kDa
Clone number:	JB42-26

Description: Tumor protein P53, also known as p53, cellular tumor antigen p53 (UniProt name), the Guardian of the Genome, phosphoprotein p53, tumor suppressor p53, antigen NY-CO-13, or transformation-related protein 53 (TRP53), is any isoform of a protein encoded by homologous genes in various organisms, such as TP53 (humans) and Trp53 (mice). This homolog (originally thought to be, and often spoken of as, a single protein) is crucial in vertebrates, where it prevents cancer formation. As such, p53 has been described as "the guardian of the genome" because of its role in conserving stability by preventing genome mutation. Hence TP53 is classified as a tumor suppressor gene. The name p53 was given in 1979 describing the apparent molecular mass; SDS-PAGE analysis indicates that it is a 53-kilodalton (kDa) protein. However, the actual mass of the full-length p53 protein (p53α) based on the sum of masses of the amino acid residues is only 43.7 kDa. This difference is due to the high number of proline residues in the protein, which slow its migration on SDS-PAGE, thus making it appear heavier than it actually is. In addition to the full-length protein, the human TP53 gene encodes at least 15 protein isoforms, ranging in size from 3.5 to 43.7 kDa. All these p53 proteins are called the p53 isoforms. The TP53 gene is the most frequently mutated gene (>50%) in human cancer, indicating that the TP53 gene plays a crucial role in preventing cancer formation. TP53 gene encodes proteins that bind to DNA and regulate gene expression to prevent mutations of the genome.

Immunogen:	Synthetic peptide within Human p53 aa 344-393 / 393.
Positive control:	A431 cell lysate, 293 cell lysate, human stomach carcinoma tissue, human colon carcinoma tissue, Daudi.
Subcellular location:	Cytoplasm. Nucles.
Database links:	SwissProt: P04637 Human
Recommended Dilutions:	
WB	1:1:1,000-1:2,000
IHC-P	1:50-1:100
FC	1:50-1:100
IF-Cell	1:100-1:500
Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

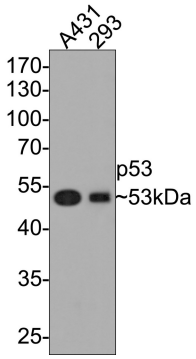

Fig1: Western blot analysis of p53 on different lysates with Rabbit anti-p53 antibody (ET7107-33) at 1/1,000 dilution.

Lane 1: A431 cell lysate
Lane 2: 293 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 53 kDa
Observed band size: 53 kDa

Exposure time: 2 minutes;

10% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET7107-33) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

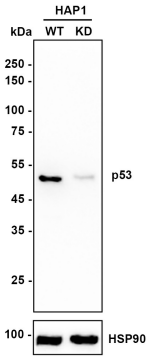

Fig2: Western blot analysis of p53 on different lysates with Rabbit anti-p53 antibody (ET7107-33) at 1/2,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-p53 KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 53 kDa
Observed band size: 53 kDa

Exposure time: 40 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET7107-33) at 1/2,000 dilution was used in K1803 at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

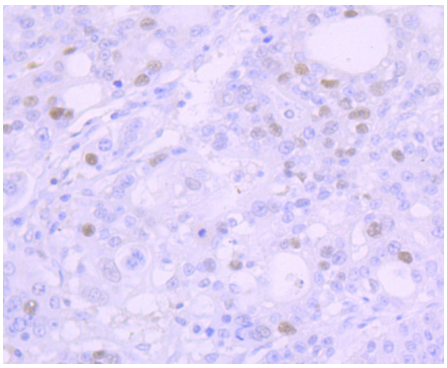

Fig3: Immunohistochemical analysis of paraffin-embedded human stomach carcinoma tissue using anti-p53 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7107-33, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

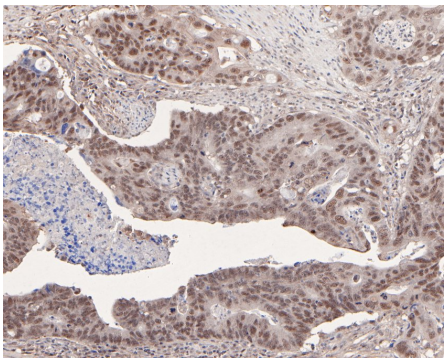

Fig4: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue using anti-p53 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET7107-33, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

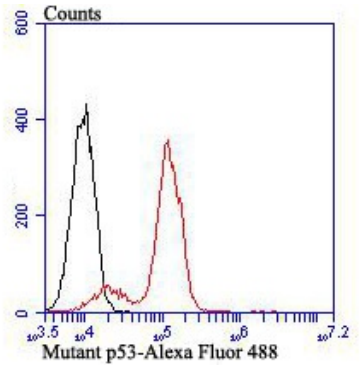

Fig5: Flow cytometric analysis of p53 was done on Daudi cells. The cells were fixed, permeabilized and stained with the primary antibody (ET7107-33, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Louria-Hayon I et al. The promyelocytic leukemia protein protects p53 from Mdm2-mediated inhibition and degradation. J Biol Chem 278:33134-33141 (2003).
2. An W et al. Ordered cooperative functions of PRMT1, p300, and CARM1 in transcriptional activation by p53. Cell 117:735-748 (2004).