

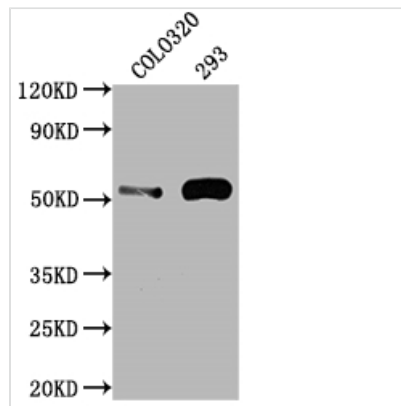


TP53 Recombinant Monoclonal Antibody

Product Code	CSB-RA236796A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P04637
Immunogen	A synthesized peptide derived from human p53
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IF; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200
Relevance	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. 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 seem to have to 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-ARNTL/BMAL1-mediated transcriptional activation of PER2 (PubMed:24051492).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Cell biology
Gene Names	TP53
Clone No.	3D4



Image



Western Blot

Positive WB detected in: COLO320 whole cell lysate, 293 whole cell lysate

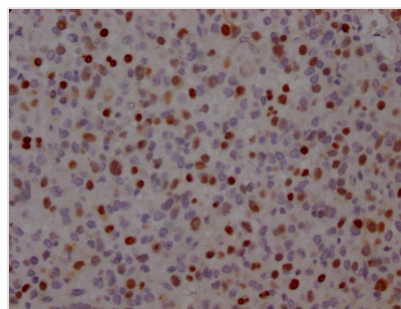
All lanes: TP53 antibody at 1:2000

Secondary

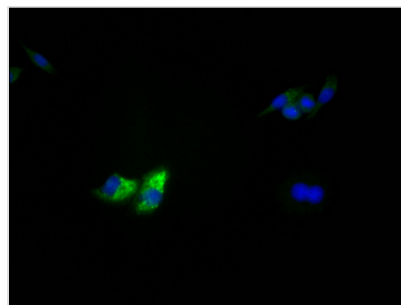
Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 44, 38, 39, 40, 34, 35, 30, 24, 25 kDa

Observed band size: 53 kDa



IHC image of CSB-RA236796A0HU diluted at 1:100 and staining in paraffin-embedded human glioma cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunofluorescence staining of HepG2 Cells with CSB-RA236796A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

The TP53 recombinant monoclonal antibody can detect human TP53 protein in ELISA, WB, IHC, and IF applications. It is produced using recombinant DNA technology, where the gene encoding the TP53 monoclonal antibody is synthesized after sequencing the cDNA of the TP53 antibody-producing hybridomas. To produce the hybridomas, B cells isolated from an animal immunized with a synthesized peptide derived from human TP53 are fused with myeloma cells. The synthesized gene is then cloned into a vector and transfected into cells for cultivation. The resulting TP53 recombinant monoclonal antibody is purified through affinity chromatography from the cell culture supernatant.

The TP53 protein, also known as p53, acts as a tumor suppressor by preventing cells from dividing when they have damaged DNA that could lead to the development of cancer. When DNA damage or other cellular stress occurs, the levels of p53 increase, which leads to the activation of multiple pathways that can result in several outcomes, including cell cycle arrest, apoptosis,



senescence, and DNA repair. Mutations in TP53 that lead to loss of TP53 function can lead to uncontrolled cell growth and the development of tumors.