

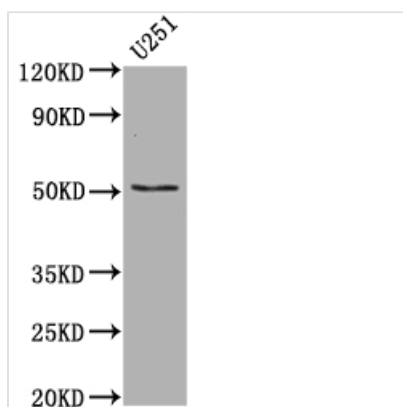


TP53 Recombinant Monoclonal Antibody

Product Code	CSB-RA825742A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P04637
Immunogen	A synthesized peptide derived from human Mutant 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.	5C3



Image



Western Blot

Positive WB detected in: U-251 whole cell lysate

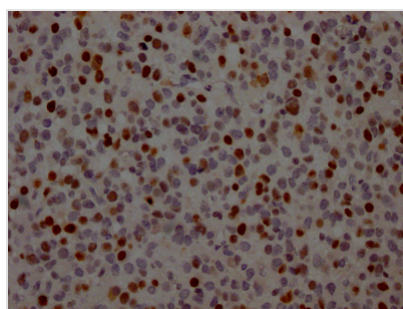
All lanes: Mutant p53 antibody at 1:1000

Secondary

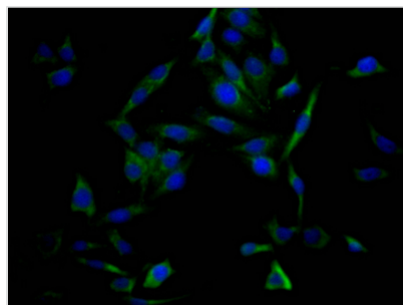
Goat polyclonal to rabbit IgG at 1/50000 dilution

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

Observed band size: 53 kDa



IHC image of CSB-RA825742A0HU 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-RA825742A0HU 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

CUSABIO extracted B lymphocytes from an animal immunized with a synthetic peptide derived from human TP53. The B cells were then fused with myeloma cells to produce hybridomas. The variable light and variable heavy domains of TP53 antibody-producing hybridomas were sequenced to construct a vector for a recombinant generation. Subsequently, the TP53 monoclonal antibody gene-containing vector was transfected into cells for cultivation, and the TP53 recombinant monoclonal antibody was isolated and purified using affinity chromatography from the cell culture supernatant. The specificity of the purified antibody for human TP53 protein detection was evaluated through ELISA, WB, IHC, and IFC applications.

The TP53 protein, also known as p53, is a transcription factor that maintains genomic stability and prevents the accumulation of mutations that could lead to cancer. Dysfunction or loss of TP53 is commonly associated with cancer development and progression. When a cell experiences DNA damage or other stresses that could potentially lead to cancer, the p53 protein is activated and



triggers a series of responses to prevent the damaged cell from replicating and potentially becoming a tumor. These responses include cell cycle arrest, apoptosis, and DNA repair.