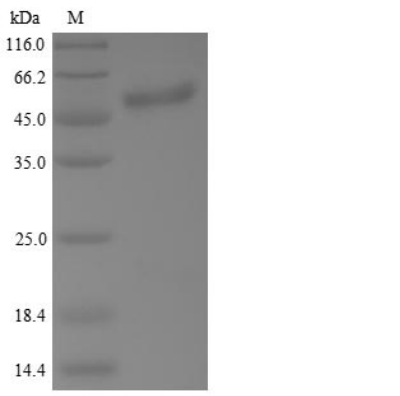
Recombinant Human Cellular tumor antigen p53 (TP53)

Product Code	CSB-YP024077HU
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
Abbreviation	Recombinant Human TP53 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P04637
Alias	Antigen NY-CO-13 Phosphoprotein p53 Tumor suppressor p53
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MEEPQSDPSVEPPLSQETFSDLWKLLPENNVLSPLPSQAMDDLMLSPDDIEQ WFTEDPGPDEAPRMPEAAPPVAPAPAAPTPAAPAPAPSWPLSSSVPSQKTYQ GSYGFRLGFLHSGTAKSVTCTYSPALNKMFCQLAKTCPVQLWVDSTPPPGTR VRAMAIYKQSQHMTEVVRRCPHHERCSDSDGLAPPQHLIRVEGNLRVEYLDD RNTFRHSVVVPYEPPEVGSDCTTIHYNYMCNSSCMGGMNRRPILTIITLEDSS GNLLGRNSFEVRVCACPGRDRRTEEENLRKKGEPHHELPPGSTKRALPNNTS SSPQPKKKPLDGEYFTLQIRGRERFEMFRELNEALELKDAQAGKEPGGSRAH SSHLKSKKGQSTSRHKKLMFKTEGPDSD
Research Area	Cell Biology

Source	Yeast
Target Names	TP53
Protein Names	Recommended name: Cellular tumor antigen p53 Alternative name(s): Antigen NY-CO-13 Phosphoprotein p53 Tumor suppressor p53
Expression Region	1-393aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	45.7kDa
Protein Length	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The Recombinant Full-length Human Cellular tumor antigen p53 (TP53) is a full-length protein produced in yeast. This recombinant TP53 protein contains 393 amino acids and is tagged N-terminally with a 6xHis-tag. It has a calculated molecular weight of 45.7kDa, with purity greater than 90% as determined by SDS-PAGE. Based on its functions, this TP53 protein may be used in the studies of its gene-specific transcription regulation with intracellular delivery of the protein per se and cancers.

TP53, generally called p53, is a nuclear transcription factor involved in the induction of cell cycle arrest or apoptosis by transactivating a large number of target genes. Functionally active p53 normalizes the cell cycle through completely repairing damaged DNA. Once serious DNA damage is irreversible, pro-apoptotic p53 clears these cells with severe DNA lesions thus preventing the transfer of damaged DNA to daughter cells. Therefore, p53 also functions to sustain genomic integrity.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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