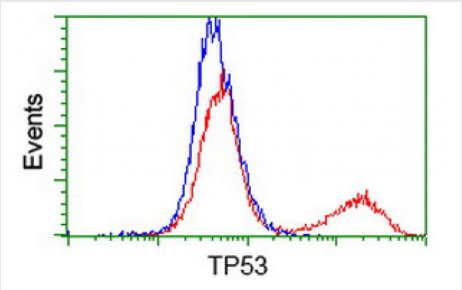
TP53 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	TP53, Monoclonal Antibody
Full Product Name	Mouse monoclonal TP53 antibody
Product Gene Name	anti-TP53 antibody
Product Synonym Names	TP53 antibody
Clonality	Monoclonal
Isotype	IgG2a
Clone Number	2F7
Host	Mouse
Form/Format	Supplied in PBS buffer, pH 7.3, containing 1% BSA, 50% glycerol and 0.02% sodium azide.
Purity/Purification	Purified by affinity chromatography.
Concentration	500 ug-1 mg/ml (lot specific)
Preparation and Storage	Store at 4 degree C for short term storage. Aliquot and store at -20 degree C for long term storage. Avoid repeated freeze/thaw cycles.
Molecular Weight	24,401 Da
OMIM	X02469 mRNA
Immunogen	TP53 antibody was raised in mouse using a full length recombinant protein of human TP53 (NP_000537) produced in HEK293T cells, as the immunogen.
Cross-Reactivity	Human, Monkey
Product Categories/Family for anti-TP53 antibody	Cancer
Applications Tested/Suitable for anti-TP53 antibody	Flow Cytometry (FC/FACS), Immunofluorescence (IF), Western Blot (WB)
Application Notes for anti-TP53 antibody	FC: 1:100 IF: 1:100 WB: 1:500-2000
Related Product Information for anti-TP53 antibody	MBS5307548 is an antibody targeting TP53. Also known as Mouse monoclonal TP53 antibody. Host: Mouse.
Other Notes	Small volumes of anti-TP53 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Flow Cytometry (FC/FACS) of anti-TP53 antibody
Flow Cytometric analysis of HEK293T cells transfected with either recombinant TP53 protein (red) or empty vector (blue) stained using TP53 antibody

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TP53. It may not necessarily be applicable to this product.

NCBI GI #	1090936429
NCBI GeneID	7157
NCBI Accession #	AOX22942.1
UniProt Secondary Accession #	Q15086; Q15087; Q15088; Q16535; Q16807; Q16808; Q16809; Q16810; Q16811; Q16848; Q2XN98
UniProt Related Accession #	P04637
NCBI Official Full Name	TP53, partial
NCBI Official Synonym Full Names	tumor protein p53
NCBI Official Symbol	TP53
NCBI Official Synonym Symbols	P53; BCC7; LFS1; TRP53
UniProt Protein Name	Cellular tumor antigen p53
UniProt Synonym Protein Names	Antigen NY-CO-13; Phosphoprotein p53; Tumor suppressor p53
Protein Family	Cellular tumor antigen
UniProt Gene Name	TP53
UniProt Synonym Gene Names	P53
NCBI Protein Information	cellular tumor antigen p53
NCBI Summary for TP53	This gene encodes a tumor suppressor protein containing transcriptional activation, DNA binding, and oligomerization domains. The encoded protein responds to diverse cellular stresses to regulate expression of target genes, thereby inducing cell cycle arrest, apoptosis, senescence, DNA repair, or changes in metabolism. Mutations in this gene are associated with a variety of human cancers, including hereditary cancers such as Li-Fraumeni syndrome. Alternative splicing of this gene and the use of alternate promoters result in multiple transcript variants and isoforms. Additional isoforms have also been shown to result from the use of alternate translation initiation codons from identical transcript variants (PMIDs: 12032546, 20937277). [provided by RefSeq, Dec 2016]

UniProt Comments for TP53	p53: a transcription factor and major tumor suppressor that plays a major role in regulating cellular responses to DNA damage and other genomic aberrations. Activation of p53 can lead to either cell cycle arrest and DNA repair or apoptosis. More than 50 percent of human tumors contain a mutation or deletion of the TP53 gene. p53 is modified post-translationally at multiple sites. DNA damage induces phosphorylation of p53 at S15, S20 and S37, reducing its interaction with the oncoprotein MDM2. MDM2 inhibits p53 accumulation by targeting it for ubiquitination and proteasomal degradation. Phosphorylated by many kinases including Chk2 and Chk1 at S20, enhancing its tetramerization, stability and activity. The phosphorylation by CAK at S392 is increased in human tumors and has been reported to influence the growth suppressor function, DNA binding and transcriptional activation of p53. Phosphorylation of p53 at S46 regulates the ability of p53 to induce apoptosis. The acetylation of p53 appears to play a positive role in the accumulation of p53 during the stress response. Following DNA damage, p53 becomes acetylated at K382, enhancing its binding to DNA. Deacetylation of p53 can occur through interaction with SIRT1, a deacetylase that may be involved in cellular aging and the DNA damage response. p53 regulates the transcription of a set of genes encoding endosomal proteins that regulate endosomal functions. These include STEAP3 and CHMP4C, which enhance exosome production, and CAV1 and CHMP4C, which produce a more rapid endosomal clearance of the EGFR from the plasma membrane. DNA damage regulates a p53-mediated secretory pathway, increasing the secretion of some proteins such as Hsp90, SERPINE1, SERPINB5, NKEF-A, and CyPA, and inhibiting the secretion of others including CTSL and IGFBP-2. Two alternatively spliced human isoforms have been reported. Isoform 2 is expressed in quiescent lymphocytes. Seems to be non-functional. May be produced at very low levels due to a premature stop codon in the mRNA, leading to nonsense-mediated mRNA decay. Protein type: Activator; DNA-binding; Motility/polarity/chemotaxis; Nuclear receptor co-regulator; Transcription factor; Tumor suppressor Chromosomal Location of Human Ortholog: 17p13.1 Cellular Component: cytoplasm; cytosol; mitochondrion; nuclear body; nuclear chromatin; nuclear matrix; nucleolus; nucleoplasm; nucleus; PML body; protein complex; replication fork; transcription factor TFIID complex Molecular Function: ATP binding; chaperone binding; chromatin binding; copper ion binding; damaged DNA binding; DNA binding; double-stranded DNA binding; enzyme binding; histone acetyltransferase binding; identical protein binding; p53 binding; protease binding; protein binding; protein heterodimerization activity; protein kinase binding; protein N-terminus binding; protein phosphatase 2A binding; protein phosphatase binding; protein self-association; receptor tyrosine kinase binding; sequence-specific DNA binding; transcription factor activity; transcription factor binding; ubiquitin protein ligase binding; zinc ion binding Biological Process: base-excision repair; cell aging; cell cycle arrest; cell differentiation; cell proliferation; cellular response to glucose starvation; chromatin assembly; circadian behavior; determination of adult life span; DNA damage response, signal transduction by p53 class mediator; DNA damage response, signal transduction by p53 class mediator resulting in cell cycle arrest; DNA damage response, signal transduction by p53 class mediator resulting in induction of apoptosis; DNA damage response, signal transduction by p53 class mediator resulting in transcription of p21 class mediator; DNA strand renaturation; entrainment of circadian clock by photoperiod; ER overload response; G1 DNA damage checkpoint; multicellular organismal development; negative regulation of apoptosis; negative regulation of cell growth; negative regulation of cell proliferation; negative regulation of fibroblast proliferation; negative regulation of helicase activity; negative regulation of telomerase activity; negative regulation of transcription from RNA polymerase II promoter; negative regulation of transcription, DNA-dependent; nucleotide-excision repair; positive regulation of apoptosis; positive regulation of histone deacetylation; positive regulation of neuron apoptosis; positive regulation of peptidyl-tyrosine phosphorylation; positive regulation of protein export from nucleus; positive regulation of protein oligomerization; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription, DNA-dependent; proteasomal ubiquitin-dependent protein catabolic process; protein complex assembly; protein localization; protein sumoylation; protein tetramerization; Ras protein signal transduction; regulation of apoptosis; regulation of mitochondrial membrane permeability; regulation of transcription, DNA-dependent; response to antibiotic; response to DNA damage stimulus; response to gamma radiation; response to X-ray; viral reproduction Disease: Adrenocortical Carcinoma, Hereditary; Basal Cell Carcinoma, Susceptibility To, 7; Breast Cancer; Colorectal Cancer; Glioma Susceptibility 1; Hepatocellular Carcinoma; Li-fraumeni Syndrome 1; Nasopharyngeal Carcinoma; Osteogenic Sarcoma; Pancreatic Cancer; Papilloma Of Choroid Plexus
Research Articles on TP53	**1.** High expression of TP53 is associated with colorectal cancer in gastric cancer.

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