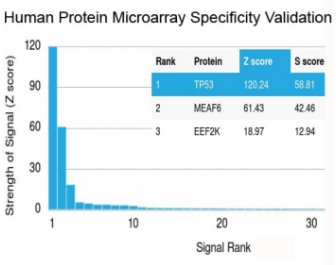
Recombinant TP53 Antibody (N-Terminal Region) [clone rBP53-12] (V3647)

Catalog No.	Formulation	Size
V3647-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3647-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3647SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3647IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

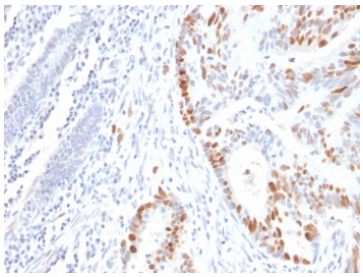
Recombinant | MOUSE MONOCLONAL

Bulk quote request

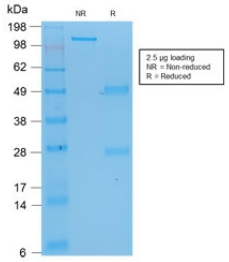
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rBP53-12
Purity	Protein G affinity chromatography
Gene ID	7157
Localization	Nuclear
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT
Limitations	This recombinant TP53 antibody is available for research use only.



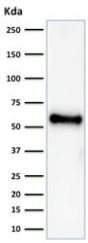
Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using recombinant TP53 antibody (clone rBP53-12).
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



IHC testing of FFPE human colon carcinoma with recombinant TP53 antibody. Required HIER: boil tissue sections in pH6, 10mM citrate buffer, for 10-20 min followed by cooling at RT for 20 min.



SDS-PAGE analysis of purified, BSA-free recombinant TP53 antibody (clone rBP53-12) as confirmation of integrity and purity.



Western blot testing of human HeLa cell lysate with recombinant TP53 antibody (clone rBP53-12). Expetected molecular weight ~53 kDa.

Description

Recombinant TP53 antibody detects the tumor suppressor protein p53, a master regulator of cellular homeostasis encoded by the TP53 gene. P53 responds to a wide range of stress signals, including DNA damage, oncogene activation, and hypoxia, by directing cell cycle arrest, apoptosis, or senescence. This protective function is essential for preserving genomic integrity, and disruption of TP53 is strongly linked to cancer.

P53 is normally kept at low levels through degradation by MDM2. Under stress, post translational modifications stabilize p53, allowing its accumulation in the nucleus where it activates or represses transcription of numerous target genes. These include regulators of DNA repair, apoptosis, and metabolism. Because TP53 mutations are the most frequent genetic alterations in human cancers, understanding p53 biology is vital for oncology research.

The Recombinant TP53 antibody clone rBP53-12 ensures precise and consistent recognition. Recombinant production eliminates variability across lots, enabling reproducible data collection. Clone rBP53-12 has been used in cancer biology to study TP53 mutations, in cell biology to monitor stress responses, and in developmental biology to track checkpoint regulation. Its specificity supports accurate detection of nuclear p53 in experimental systems.

Studies using clone rBP53-12 have clarified how altered p53 function contributes to tumorigenesis and therapeutic resistance. Loss of tumor suppressor activity or gain of oncogenic properties through mutation can profoundly influence disease course. Detection of TP53 has diagnostic and prognostic value in many cancers, and this antibody contributes to translational research focused on restoring p53 function as a therapeutic strategy.

NSJ Bioreagents provides this Recombinant TP53 antibody to advance studies of tumor suppression, cellular stress pathways, and cancer. The protein is also known as tumor protein p53 antibody, cellular tumor antigen p53 antibody, guardian of the genome antibody, and TP53 transcription factor antibody, reflecting its diverse roles in biology.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the recombinant TP53 antibody to be titered up or down for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant human wild-type p53 protein was used as the immunogen for this recombinant TP53 antibody. The epitope has been mapped to within amino acids 16-25.

Storage

Store the recombinant TP53 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

References (1)