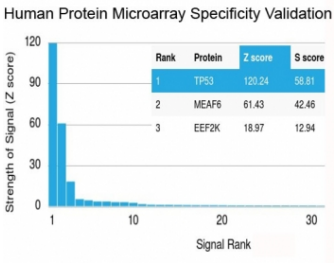
TP53 Antibody N-Terminus / p53 N-Terminal Antibody [clone rBP53-12] (V3647)

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

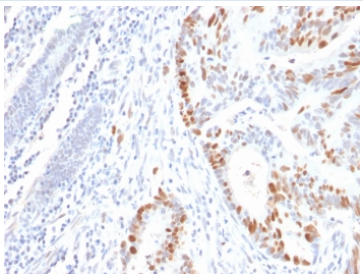
Recombinant MOUSE MONOCLONAL

Bulk quote request

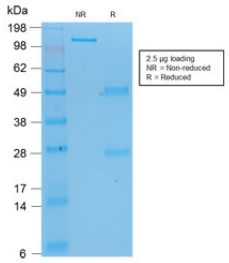
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rBP53-12
Purity	Protein G affinity chromatography
Gene ID	7157
Localization	Nuclear
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min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



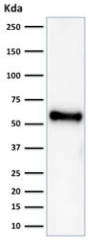
TP53 Antibody N-Terminus / p53 N-Terminal Antibody (clone rBP53-12). Protein microarray specificity validation using a HuProt(TM) human protein array containing more than 19,000 full-length human proteins demonstrates selective binding of the recombinant monoclonal clone rBP53-12. The ranked signal plot shows TP53 as the top detected target, supporting the specificity of the TP53 Antibody N-Terminus for the p53 protein.
The Z-score represents the strength of antibody binding to each protein target detected using a fluorescently labeled secondary antibody. Z-scores are expressed in standard deviations above the mean signal across the array. Proteins are ranked by descending Z-score, and the S-score represents the difference between adjacent Z-scores in the ranked list. A high S-score indicates strong specificity of the antibody for its intended target relative to other proteins present on the array.



TP53 Antibody N-Terminus / p53 N-Terminal Antibody (clone rBP53-12). Immunohistochemistry analysis of formalin-fixed, paraffin-embedded human colon carcinoma demonstrates nuclear staining of tumor epithelial cells using the recombinant mouse monoclonal clone rBP53-12. The HRP-DAB brown chromogenic signal highlights nuclear localization of Tumor protein p53 / TP53 within malignant glandular epithelial cells, while surrounding stromal elements show minimal staining. Tissue sections were subjected to heat-induced epitope retrieval by boiling in pH 6.0, 10mM citrate buffer for 10-20 minutes followed by cooling at room temperature prior to antibody incubation.



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



TP53 Antibody N-Terminus / p53 N-Terminal Antibody (clone rBP53-12). Western blot analysis of human HeLa cell lysate demonstrates detection of Tumor protein p53 using the recombinant mouse monoclonal clone rBP53-12. Lane 1: human HeLa cell lysate. A band is detected at approximately 53 kDa, consistent with the predicted molecular weight of Tumor protein p53 / TP53. This result confirms that the TP53 Antibody N-Terminus detects endogenous p53 protein in human cell lysates by western blot analysis.

Description

Tumor protein p53 (TP53) is a sequence-specific transcription factor that functions as a central tumor suppressor regulating DNA damage responses, apoptosis, and genomic stability. The TP53 Antibody N-Terminus clone rBP53-12 is a recombinant mouse monoclonal antibody developed to recognize the N-terminal region of the p53 protein, enabling detection of the regulatory domain responsible for transcriptional activation and protein interaction signaling.

TP53 antibody reagents are widely used in cancer biology because p53 is one of the most frequently altered proteins in human tumors. The TP53 gene, located on chromosome 17p13.1, encodes Tumor protein p53, also known as Cellular tumor antigen p53. The p53 protein contains several functional regions including an N-terminal transcriptional activation domain, a central DNA-binding domain responsible for sequence-specific transcriptional regulation, a tetramerization domain required for formation of active transcriptional complexes, and a C-terminal regulatory region that modulates DNA binding and protein stability.

The defining feature of the TP53 Antibody N-Terminus clone rBP53-12 is recognition of the N-terminal regulatory region of Tumor protein p53. The N-terminus of p53 contains transcriptional activation domains that recruit transcription factors and co-regulators required for activation of p53-responsive genes. This N-terminal segment is also a key regulatory interface for interaction with proteins such as MDM2, which binds the N-terminus of p53 and mediates ubiquitination and proteasomal degradation under normal cellular conditions.

Because the N-terminal region controls p53 activation and regulatory signaling, antibodies targeting this domain are valuable tools for studying the mechanisms that regulate TP53 stability and transcriptional activity. The TP53 Antibody N-Terminus enables researchers to investigate expression of the N-terminal portion of p53 and to analyze signaling pathways that stabilize the protein following DNA damage, oncogenic stress, or cellular injury.

The recombinant monoclonal clone rBP53-12 therefore provides a defined reagent for detecting the N-terminal domain of Tumor protein p53 in experimental systems investigating tumor suppressor signaling. By targeting the regulatory N-terminal region of TP53, the TP53 Antibody N-Terminus clone rBP53-12 supports research focused on transcriptional activation mechanisms, p53 stabilization pathways, and the molecular control of genomic integrity.

Researchers studying p53 expression and TP53 signaling can explore our Protein Microarray Validated p53 Antibody page for additional reagents targeting this key tumor suppressor in cancer, DNA damage response and cell cycle research.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the TP53 Antibody N-Terminus / p53 N-Terminal 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 TP53 Antibody N-Terminus / p53 N-Terminal 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).

Alternate Names

p53 antibody, TP53 antibody, Tumor protein p53 antibody, Cellular tumor antigen p53 antibody, p53 tumor suppressor antibody

References (1)

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