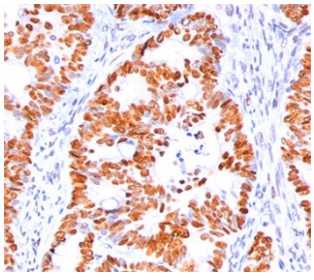
p53 Antibody BP53-12 / TP53 Tumor Suppressor Antibody / N-Terminal Region [clone BP53-12] (V2282)

Catalog No.	Formulation	Size
V2282-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2282-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2282SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2282IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

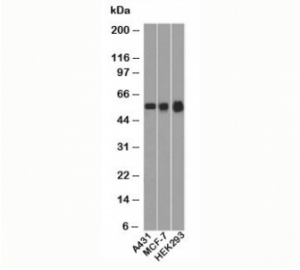
Citations (23)

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	BP53-12
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	7157
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This p53 antibody is available for research use only.



p53 Antibody BP53-12 / TP53 Tumor Suppressor Antibody. Immunohistochemistry analysis of FFPE human colon carcinoma tissue demonstrates strong nuclear staining of tumor epithelial cells using p53 Antibody Clone BP53-12. The HRP-DAB brown chromogenic signal highlights nuclear localization of Tumor protein p53 within malignant epithelial cells, while surrounding stromal and non-neoplastic cells show comparatively weaker staining. The staining pattern is consistent with nuclear accumulation of TP53 commonly observed in colorectal carcinoma.



p53 Antibody BP53-12 / TP53 Tumor Suppressor Antibody. Western blot analysis of human cell lysates demonstrates detection of Tumor protein p53 across multiple cell lines using p53 Antibody Clone BP53-12. Lane 1: A431 cell lysate, Lane 2: MCF-7 cell lysate, Lane 3: HEK293 cell lysate. A band is detected at approximately 53 kDa, consistent with the predicted molecular weight of p53 / TP53.

Description

Tumor protein p53 (TP53) is a sequence-specific transcription factor that functions as a central tumor suppressor controlling DNA damage responses, cell cycle arrest, apoptosis, and genomic stability. The p53 Antibody BP53-12 is a well-known monoclonal antibody used by researchers to detect p53 expression and study TP53 signaling pathways involved in cancer development and cellular stress responses.

TP53 antibody, also referred to as Tumor protein p53 antibody or Cellular tumor antigen p53 antibody in the literature, targets one of the most extensively studied tumor suppressor proteins in human biology. The TP53 gene is located on chromosome 17p13.1 and encodes a transcription factor belonging to the p53 family of DNA-binding proteins. The p53 protein contains several functional domains including an N-terminal transcriptional activation region, a central DNA-binding domain responsible for sequence-specific transcriptional regulation, a tetramerization domain required for formation of active p53 complexes, and a C-terminal regulatory region that modulates DNA binding and protein stability.

Under normal cellular conditions, p53 protein levels remain tightly controlled through continuous ubiquitination and proteasomal degradation mediated primarily by the E3 ubiquitin ligase MDM2. Cellular stress signals such as DNA damage, oncogene activation, oxidative stress, or hypoxia disrupt this regulatory pathway and stabilize p53 protein. Stabilized p53 accumulates within the nucleus where it activates transcription of genes including CDKN1A (p21), BAX, and PUMA that regulate cell cycle arrest and apoptosis. Detection of these stress-induced changes in p53 expression is a central focus of many cancer biology studies, and reagents such as p53 Antibody Clone BP53-12 enable researchers to monitor these regulatory events.

The p53 Antibody Clone BP53-12 has been widely used in scientific studies examining TP53 expression, tumor suppressor signaling pathways, and nuclear accumulation of p53 in tumor cells. Clone BP53-12 recognizes Tumor protein p53 and enables detection of endogenous p53 protein in experimental systems investigating oncogenic transformation, DNA damage signaling, and transcriptional regulation mediated by TP53. Because many TP53 mutations lead to stabilization and nuclear retention of the p53 protein, detection of strong nuclear p53 signal is frequently associated with malignant transformation and disruption of tumor suppressor pathways.

Clone BP53-12 provides researchers with a well-established reagent for studying TP53 biology across diverse experimental models. The p53 Antibody Clone BP53-12 is commonly used in investigations of tumor suppressor signaling networks, cell cycle checkpoint regulation, and p53-mediated apoptosis pathways. Through detection of endogenous p53 protein, clone BP53-12 supports studies exploring mechanisms of genomic stability, oncogene-induced stress responses, and molecular pathways underlying cancer progression.

Beyond its classical tumor suppressor role, p53 participates in numerous cellular processes including metabolic regulation, immune signaling, autophagy, and stem cell homeostasis. The protein interacts with regulatory partners such as MDM2, ATM, ATR, and transcriptional co-activators including p300 and CBP that influence transcriptional activity and protein stability. Because TP53 plays a central role in maintaining genomic integrity and preventing tumor development, reagents such as p53 Antibody Clone BP53-12 remain valuable tools for investigating p53 signaling networks and molecular mechanisms underlying tumor progression.

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 p53 Antibody BP53-12 / TP53 Tumor Suppressor Antibody to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 minutes.
2. 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 p53 Antibody Clone BP53-12 / TP53 Tumor Suppressor Antibody. The antibody epitope maps within the N-terminus (aa 20-25) of p53 oncoprotein.

Storage

Store the p53 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Antigen NY-CO-13, BCC7, Cellular Tumor Antigen p53, LFS1, TP53, Transformation Related Protein 53 (TRP53), Tumor Protein p53, Tumor Suppressor p53, p53 antibody

References (1)

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