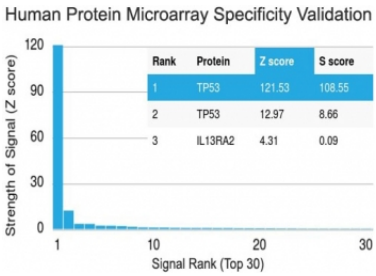
p53 Antibody PAb 122 / TP53 Tumor Suppressor Antibody / C-Terminal Region [clone PAb 122] (V3510)

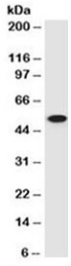
Catalog No.	Formulation	Size
V3510-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3510-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3510SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (12) **Bulk quote request**

Availability	1-2 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	PAb 122
Purity	Protein G affinity chromatography
Gene ID	7157
Localization	Nuclear
Applications	ELISA (order BSA/sodium azide-free format for coating) Western blot: 2-4ug/ml
Limitations	This p53 antibody is available for research use only.



p53 Antibody PAb 122 / TP53 Tumor Suppressor Antibody Clone PAb 122. Protein microarray specificity validation using a HuProt(TM) human protein array containing more than 19,000 full-length human proteins demonstrates strong selective binding of the p53 Antibody Clone PAb 122 to TP53. The ranked signal plot shows TP53 as the dominant target with a markedly elevated signal compared with other proteins on the array, indicating high specificity of clone PAb 122 for Tumor protein p53.
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.



p53 Antibody PAb 122 / TP53 Tumor Suppressor Antibody (clone PAb 122). Western blot analysis of human HEK293 cell lysate using p53 Antibody Clone PAb 122 detects a band at approximately 53 kDa, consistent with the predicted molecular weight of Tumor protein p53 / TP53. The result demonstrates detection of endogenous p53 protein in human 293 cells by western blot.

Description

Tumor protein p53 (TP53) is a sequence-specific transcription factor that functions as a master regulator of cellular stress responses, controlling DNA repair, cell cycle arrest, apoptosis, and senescence. The p53 Antibody PAb 122 is a historically important monoclonal antibody used to detect p53 expression and investigate TP53 signaling pathways in cancer biology and molecular cell research.

TP53 antibody, also known as Tumor protein p53 antibody or Cellular tumor antigen p53 antibody in the literature, recognizes 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 multiple structural 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 interaction and protein stability.

Under normal cellular conditions, p53 protein levels are tightly controlled through rapid 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 in the nucleus where it activates transcription of genes including CDKN1A (p21), BAX, and PUMA that regulate cell cycle arrest and apoptosis. Antibodies such as p53 Antibody Clone PAb 122 allow researchers to monitor these stress-induced changes in p53 abundance and localization.

The p53 Antibody Clone PAb 122 has been widely referenced in scientific literature for detection of p53 protein in studies investigating tumor suppressor signaling, oncogenic transformation, and DNA damage responses. Clone PAb 122 recognizes Tumor protein p53 and has been used in numerous experimental systems examining TP53 expression, nuclear accumulation of p53 in tumor cells, and regulation of p53-dependent transcriptional pathways. Because many TP53 mutations lead to stabilization of the p53 protein, detection of strong nuclear p53 signal is frequently associated with malignant transformation.

Clone PAb 122 provides researchers with a well-established tool for studying TP53 biology across diverse experimental models. The antibody is commonly used in investigations of tumor suppressor signaling networks, cell cycle checkpoints,

and p53-mediated apoptosis pathways. Through detection of endogenous p53 protein, p53 Antibody Clone PAb 122 supports studies exploring mechanisms of genomic stability and cancer development.

Beyond its classical tumor suppressor role, p53 participates in multiple 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 of the central role of TP53 in cellular stress responses and tumor suppression, reagents such as p53 Antibody Clone PAb 122 remain valuable tools for investigating p53 signaling pathways and molecular mechanisms underlying cancer 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

Variations in protocols, secondaries and substrates may require the p53 Antibody PAb 122 / TP53 Tumor Suppressor Antibody to be titered up or down for optimal performance.

Immunogen

SV40-transformed mouse B4 cells were used as the immunogen for this p53 Antibody Clone PAb 122 / TP53 Tumor Suppressor Antibody. It is specific to a conserved determinant of the p53 protein. PAb 122 binds to the C-terminus (aa 370-378) of both wild type and mutated p53.

Storage

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

Alternate Names

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

References (1)

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