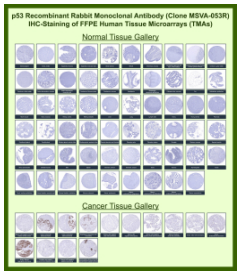
p53 Antibody for IHC / p53 Immunohistochemistry Antibody [clone MSVA-053R] (V6124)

Catalog No.	Formulation	Size
V6124-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6124-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-053R
UniProt	P04637
Localization	Centrosome, Cytoplasm, Cytoskeleton, Endoplasmic reticulum, Microtubule organizing center, Mitochondrion matrix, Nucleus, PML body
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This p53 Antibody for IHC is available for research use only.



p53 Antibody for IHC / p53 Immunohistochemistry Antibody (clone MSVA-053R). FFPE tissue microarrays demonstrate predominantly nuclear HRP-DAB brown staining in selected tumor types, consistent with accumulation of Tumor protein 53 in neoplastic cells, while most normal tissues show minimal to weak nuclear signal under physiologic conditions. Strong nuclear staining is observed in subsets of colorectal, breast, ovarian, and other carcinomas, whereas many non-neoplastic tissues display low basal expression. The overall staining distribution across normal and malignant tissues aligns with established TP53 expression patterns and publicly available data from the Human Protein Atlas.

Description

Tumor protein p53 (TP53) is a nuclear transcription factor that functions as one of the most extensively studied tumor suppressor proteins in human biology. Acting as a genomic surveillance protein, p53 regulates transcriptional programs that control cell cycle arrest, DNA repair, and apoptosis in response to cellular stress. The p53 Antibody for IHC / p53 Immunohistochemistry Antibody is designed for immunohistochemistry analysis of p53 protein expression in formalin-

fixed, paraffin-embedded tissues, enabling visualization of nuclear p53 staining patterns in normal and tumor specimens.

p53 antibody, also referred to as TP53 antibody or Tumor protein p53 antibody in the literature, is widely used for immunohistochemistry evaluation of p53 expression in pathological tissue samples. In healthy cells p53 protein levels remain low due to continuous ubiquitin-mediated degradation driven 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 allow accumulation of p53 in the nucleus, where it activates transcription of genes involved in growth arrest and programmed cell death. Because mutant forms of p53 often become stabilized in tumor cells, strong nuclear staining detected by immunohistochemistry frequently correlates with TP53 mutation status in many cancers.

p53 immunohistochemistry has become a widely used method for studying tumor biology and evaluating p53 protein expression in FFPE tissues. Nuclear staining patterns observed with a p53 antibody for IHC reflect accumulation of p53 protein within tumor cells and are commonly examined in carcinomas of the colon, ovary, lung, breast, and many other tissues. Immunohistochemistry analysis allows pathologists and researchers to evaluate p53 expression within the architectural context of tissue sections, enabling assessment of tumor cell populations and their surrounding microenvironment.

Tissue microarray (TMA) analysis provides an effective approach for evaluating antibody performance across a large panel of tissues simultaneously. Immunohistochemistry testing of recombinant rabbit monoclonal clone MSVA-053R using human tissue microarrays demonstrates nuclear staining patterns consistent with p53 expression in multiple tumor tissues while most normal tissues show limited staining. These TMA datasets enable side-by-side comparison of p53 immunohistochemistry staining across dozens of normal organs and cancer types, providing valuable reference information for evaluating p53 expression patterns in FFPE tissue specimens.

Use of a p53 antibody for IHC allows researchers to visualize nuclear p53 protein distribution directly within tissue sections. Recombinant rabbit monoclonal antibody clone MSVA-053R is suitable for immunohistochemistry detection of p53 in FFPE tissues and supports tissue microarray-based studies investigating tumor suppressor biology, cancer pathology, and patterns of p53 expression across normal and malignant human tissues.

Application Notes

1. Optimal dilution of the p53 IHC antibody should be determined by the researcher.

2. This p53 Antibody for IHC / p53 Immunohistochemistry Antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant human full-length TP53 protein was used as the immunogen for the p53 Antibody for IHC / p53 Immunohistochemistry Antibody.

Storage

p53 Antibody for IHC with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

TP53 antibody, Tumor protein p53 antibody, Cellular tumor antigen p53 antibody, Phosphoprotein p53 antibody, Transformation related protein 53 antibody

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