PRODUCT INFORMATION

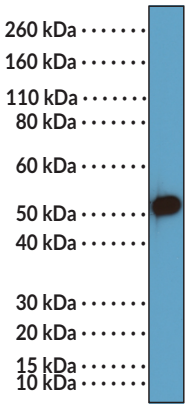
p53 (N-Term) Rabbit Monoclonal Antibody (RM387)

Item No. 32315

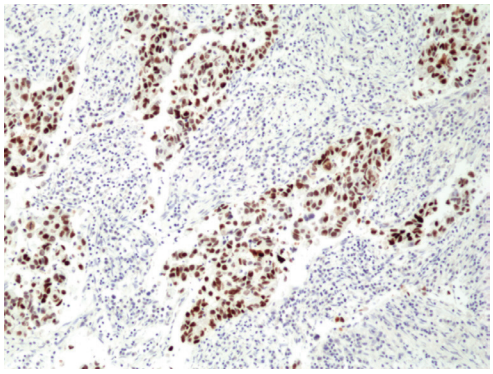
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Antigen NY-CO-13, Cellular Tumor Antigen p53, Phosphoprotein p53, Transformation-related Protein 53, Tumor Protein p53, Tumor Suppressor p53
Immunogen:	Peptide from the N-terminal region of human p53
Cross Reactivity:	(+) p53
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM387
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of 293 cell lysate using p53 (N-Term) Rabbit Monoclonal Antibody (RM387) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human lung cancer tissue using p53 (N-Term) Rabbit Monoclonal Antibody (RM387) at a dilution of 1:100.

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Description

p53 is a transcription factor and tumor suppressor encoded by *TP53* in humans with roles in cell cycle arrest, apoptosis, senescence, differentiation, and DNA repair.[1,2] It is composed of two N-terminal intrinsically disordered transactivation domains (TADs), a proline-rich domain (PRD), a DNA-binding domain (DBD), a tetramerization domain (TD), and an intrinsically disordered C-terminal domain.[1] p53 is ubiquitously expressed, with protein levels increasing under conditions of extra- or intracellular stress, such as DNA damage, oncogene activation, oxidative stress, or hypoxia.[3] It is activated and translocated to the nucleus in response to cellular stress *via* post-translational modifications, such as phosphorylation, methylation, and acetylation, where it binds p53 consensus DNA-binding elements and regulates transcription of its target genes in a cell-, tissue-, and stress signal type-specific manner.[1,3] Loss-of-function and/or gain-of-function mutations in *TP53* occur in approximately 50% of human cancers.[2] Cayman's p53 (N-Term) Rabbit Monoclonal Antibody (RM387) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Liu, Y., Tavana, O., and Gu, W. p53 Modifications: Exquisite decorations of the powerful guardian. *J. Mol. Cell Biol.* **11(7)**, 564-577 (2019).
2. Stein, Y., Rotter, V., and Aloni-Grinstein, R. Gain-of-function mutant p53: All the roads lead to tumorigenesis. *Int. J. Mol. Sci.* **20(24)**, 6197 (2019).
3. Yue, X., Zhao, Y., Xu, Y., *et al.* Mutant p53 in cancer: Accumulation, gain-of-function and therapy. *J. Mol. Biol.* **429(11)**, 1595-1606 (2017).

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