

PRODUCT INFORMATION



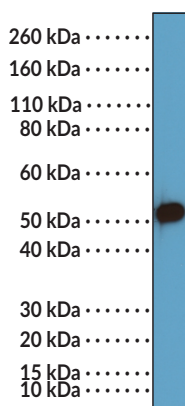
p53 (N-Term) Rabbit Monoclonal Antibody (RM387)

Item No. 32315

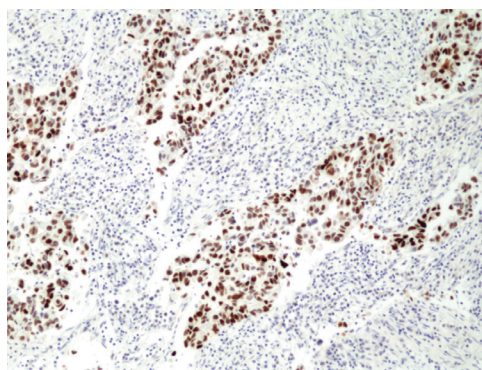
Overview and Properties

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.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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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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