

# p53 [pS15] ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified

**REF** Catalog no. 700439

(See product label for lot information)



**Clone/PAD:** 14H61L24  
**Isotype:** IgG  
**Gene ID:** 7157  
**Protein Acc. No.:** P04637  
**Qty:** 100 µg  
**Volume:** 200 µl  
**Concentration:** 0.5 mg/ml

## Formulation

PBS + 0.09% azide

## Immunogen

A peptide corresponding to amino acids 9-19 of P04637.

## Immunogen sequence

SVEPPL[pS]QETF

## Reactivity

This antibody reacts with Human p53 [pS15]. Based on sequence similarity, reactivity to chimpanzee, guinea pig, swine, sheep, bovine, equine, feline, Rhesus monkey, and Xenopus is expected.

## Specificity

This antibody is specific for pS15 and does not recognize non-phosphorylated p53.

## Storage

2-8°C for up to 1 mo, -20°C for long term storage. Avoid repeated freezing and thawing.



## Expiration Date

Expires one year from date of receipt when stored as instructed.

## Validated Applications:

	Species	Test Material	Concentration
Immunofluorescence	human	U2-OS + camptothecin	0.5-2 µg/ml
Flow Cytometry	human	U2-OS + camptothecin	1-3 µg/test
TR-FRET	human	p53 [pS15] peptide substrate	User Determined

## Background

p53 is a 53 kDa protein normally found in the cell nucleus. The protein forms a tetramer which binds to specific DNA sequences where it serves to enhance the transcription rate of certain genes (including p21/waf1, mdm2, cyclin G, bax, and others) or inactivate the transcription of certain other genes (including topoisomerase Iα). p53 controls the cell cycle by regulating the G1 to S transition, preventing DNA replication when the mitotic spindle is damaged, and preventing the G2 to M transition. The level of p53 expression is observed to increase in response to certain stimuli including gamma irradiation-induced DNA breakage and arrest of DNA or RNA synthesis. Overexpression of p53 inhibits entry into mitosis, and therefore serves to prevent replication of damaged cells (1,2). Aberrant p53 expression causes a variety of problems, p53 over-expression inhibits TFF2 mRNA, protein, and promoter activity leading to apoptosis (3), while loss of p53 favors symmetric cell division (4). p53 protein accumulation is controlled by Polo-like kinase 1 (Plk1) through phosphorylation of topoisomerase I-binding protein (Topors) (5).

## References

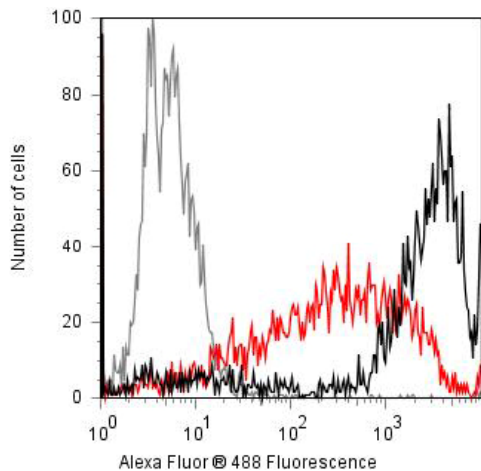
1. Bartek, J. et al. (1991) Aberrant expression of the p53 oncoprotein is a common feature of a wide spectrum of human malignancies. *Oncogene* 6: 1699-1703.
2. Agarwal, M.L. et al. (1998) The p53 network. *J. Biol. Chem.* 273:1-4.
3. Pu, S.P. (2009) p53 inhibition of AP1-dependent TFF2 expression induces apoptosis and inhibits cell migration in gastric cancer cells. *Am. J. Gastrointest. Liver Physiol.* 297: G385-G396.
4. Cicalese, A. et al. (2009) The tumor suppressor p53 regulates polarity of self-renewing divisions in mammary stem cells. *Cell.* 138: 1083-1095.
5. Yang, X. et al. (2009) Plk1-mediated phosphorylation of Topors regulates p53 stability. *J. Biol. Chem.* 284: 18588-18592.

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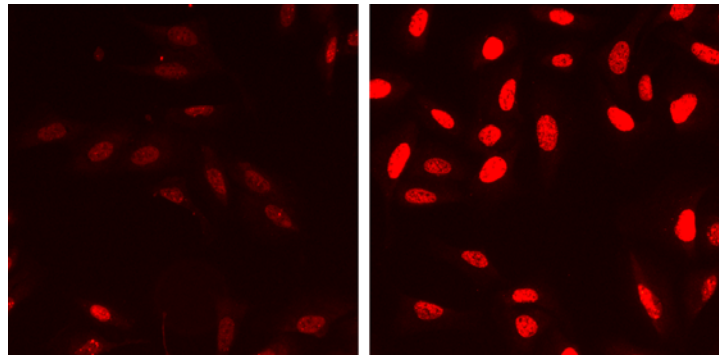
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**Flow cytometry of U2-OS cells labeled with rabbit anti-p53 [pS15]  
(Cat. No. 700439).**

U2-OS cells were stimulated with (black trace) or without (red trace) 5 µM camptothecin for 4 h prior to being fixed and permeabilized using FIX & PERM® reagents (Cat. No. GAS004). Cells were then stained with 0.5 µg anti-p53 [pS15] followed by Alexa Fluor® 488 goat anti-rabbit Ig [Cat. No. A11008]. The gray trace represents unstained cells.



**Immunocytochemistry of U2-OS cells labeled with rabbit anti-p53 [pS15]  
(Cat. No. 700439).**

Rabbit anti-p53 [pS15] (1 µg/ml) was used to label p53 [pS15] in U2-OS cells with no pretreatment (left) or pretreated with 0.25 µg/ml camptothecin (right). Alexa Fluor® 488 goat anti-rabbit (Cat. No. A11008) at 1:1000 was used as secondary antibody.

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