

p53R2 (NT) Polyclonal Antibody

Product Specifications

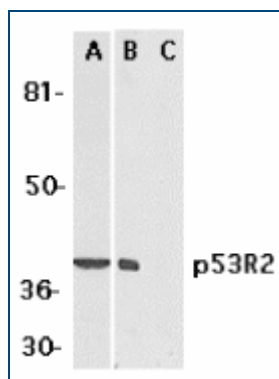
Catalog Number:	905-301
Host:	Rabbit
Species Reactivity:	Human, mouse, and rat
Predicted m.w:	~39 kDa
Applications: <i>The optimal dilution for a specific application must be determined by the investigator</i>	WB: 0.5 to 1 µg/mL IHC: 1 µg/mL
Concentration:	See product label
Purification:	Peptide affinity
Format:	PBS, 0.02% sodium azide
Storage: <i>Shipping conditions may differ from the recommended storage temperature</i>	Store at 4°C
Immunogen:	Synthetic peptide derived from sequence near the amino-terminus of human p53R2
Related Products:	
900-117	p53 ELISA
905-300	p53 DINP1 SIP Polyclonal Antibody
905-296	Chk2 (NT) Polyclonal Antibody
KAM-CC112	Chk2 Monoclonal Antibody
EKS-350	DNA Damage ELISA
900-166	Comet Assay
900-167	DePsipher Kit

Background:

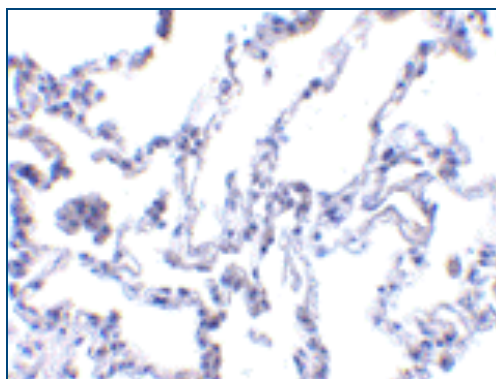
The nuclear p53 tumor suppressor protein regulates cell cycle entry at the G0-G1 transition by directly influencing the transcription of numerous genes that inhibit cell growth¹. p53R2 is p53-regulated structural and functional paralogue of the ribonucleotide reductase (RR) small subunit R2 protein hRRM2, which together with the R1 large subunit, forms the RR complex involved in DNA synthesis and repair²⁻⁵. Expression of p53R2, but not hRRM2, is regulated by p53 and the related p73 in response to exposure to DNA damaging agents such as adriamycin and ultraviolet or gamma-irradiation. The reductase activity of RR complexes containing either p53R2 or R2 is differentially regulated by the iron-binding properties of the R2 subunits, resulting in varying susceptibilities of the complexes to anti-cancer iron-chelating drugs⁶. p53R2 may also play a role in the maintenance of mitochondrial dNTP pools⁷.

References:

1. Matthews, C.K. (2006) *FASEB J.* 20, 1300-1314.
2. Tanaka, H., *et al.* (2000) *Nature (Lond.)* 404, 42-49.
3. Nakano, K., *et al.* (2000) *Oncogene*, 19, 4283-4289.
4. Yamaguchi, T., *et al.* (2001) *Cancer Res.* 61, 8256-8262.
5. Guittet, O., (2001) *J Biol Chem.* 276, 40647-40651.
6. Shao J, *et al.* (2004) *Cancer Res.* 64, 1-6.
7. Hakansson, P., Hofer, A., and Thelander, L. (2006) *J Biol Chem.* 281, 7834-7841.



Western blot analysis of p53R2 expression in A431 (A) and 3T3 cell lysates in the absence (B) or presence (C) of blocking peptide with p53R2 (NT) Polyclonal Antibody at 1 µg/mL



Immunohistochemistry of p53R2 in human lung tissue with p53R2 (NT) Polyclonal Antibody at 1 µg/mL