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p53R2 Antibody

Catalog # ASC10128

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q7LG56
Other Accession	BAA92434, 7229086
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	40737
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	p53R2 antibody can be used for detection of p53R2 by Western blot at 0.5 to 1 g/mL. Antibody can also be used for immunohistochemistry starting at 1 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	50484
Other Names	p53R2 Antibody: P53R2, MTDPS8A, MTDPS8B, P53R2, Ribonucleoside-diphosphate reductase subunit M2 B, TP53-inducible ribonucleotide reductase M2 B, p53R2, ribonucleotide reductase M2 B (TP53 inducible)
Target/Specificity	RRM2B; At least three isoforms of p53R2 are known to exist; this antibody will detect only the two smaller isoforms.
Reconstitution & Storage	p53R2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	p53R2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RRM2B
Synonyms	P53R2
Function	Plays a pivotal role in cell survival by repairing damaged DNA in a p53/TP53-dependent manner. Supplies deoxyribonucleotides for DNA repair in cells arrested at G1 or G2. Contains an iron-tyrosyl free radical center required for catalysis. Forms an active ribonucleotide reductase (RNR)

	complex with RRM1 which is expressed both in resting and proliferating cells in response to DNA damage.
Cellular Location	Cytoplasm. Nucleus. Note=Translocates from cytoplasm to nucleus in response to DNA damage
Tissue Location	Widely expressed at a high level in skeletal muscle and at a weak level in thymus. Expressed in epithelial dysplasias and squamous cell carcinoma.

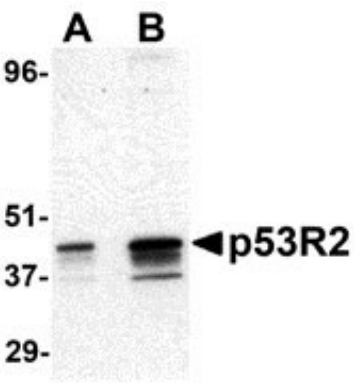
Background

p53R2 Antibody: The p53 tumor-suppressor gene integrates numerous signals that control cell life and death. Several novel molecules involved in p53 signaling, including p53R2, Chk2, p53AIP1, Noxa, PIDD, and PID/MTA2, were recently discovered. p53R2 is a p53 inducible gene that contains a p53 binding sequence and encodes a subunit of the enzyme ribonucleotide reductase. p53R2 is induced by the reagents, ultraviolet and gamma-irradiation that cause DNA damages. The product of p53R2 gene is directly involved in the p53 checkpoint for repair of damaged DNA. The isoform of the p53 family member p73 also induces p53R2 expression. p53R2 is an important target of p53 for tumor suppression.

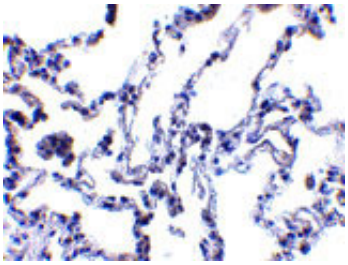
References

Tanaka H, Arakawa H, Yamaguchi T, et al. A ribonucleotide reductase gene involved in a p53-dependent cell-cycle checkpoint for DNA damage. Nature 2000; 404:42-9.
Matsuoka S, Huang M, and Elledge SJ. Linkage of ATM to cell cycle regulation by the Chk2 protein kinase. Science 1998;2 82:1893-7.
Oda E, Ohki R, Murasawa H, et al. Noxa, a BH3-only member of the Bcl-2 family and candidate mediator of p53-induced apoptosis. Science 2000; 288:1053-8.
Oda K, Arakawa H, Tanaka T, et al. p53AIP1, a potential mediator of p53-dependent apoptosis, and its regulation by Ser-46-phosphorylated p53. Cell 2000; 102:849-62.

Images

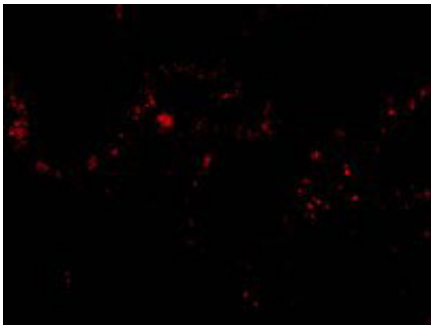


Western blot analysis of p53R2 expression in A431 cell lysate at (A) 0.5 and (B) 1 µg/mL.



Immunohistochemistry of p53R2 in human lung tissue with p53R2 antibody at 1 µg/mL.

Immunofluorescence of p53R2 in Human Lung tissue with p53R2 antibody at 20 µg/mL.



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