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p53R2 Rabbit pAb

Catalog # AP97213

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q7LG56
Other Accession	Q7LG56
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40737
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human p53R2/RRM2B
Epitope Specificity	131-230/351
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the ribonucleoside diphosphate reductase small chain family.
SUBUNIT	Heterotetramer with large (RRM1) subunit. Interacts with p53/TP53. Interacts with RRM1 in response to DNA damage.
DISEASE	Mitochondrial DNA depletion syndrome 8A (MTDPS8A) [MIM:612075]: A disorder due to mitochondrial dysfunction characterized by various combinations of neonatal hypotonia, neurological deterioration, respiratory distress, lactic acidosis, and renal tubulopathy. Note=The disease is caused by mutations affecting the gene represented in this entry.Mitochondrial DNA depletion syndrome 8B (MTDPS8B) [MIM:612075]: A disease due to mitochondrial dysfunction and characterized by ophthalmoplegia, ptosis, gastrointestinal dysmotility, cachexia, peripheral neuropathy. Note=The disease is caused by mutations affecting the gene represented in this entry.Progressive external ophthalmoplegia with mitochondrial DNA deletions autosomal dominant 5 (PEOA5) [MIM:613077]: A disorder characterized by progressive weakness of ocular muscles and levator muscle of the upper eyelid. In a minority of cases, it is associated with skeletal myopathy, which predominantly involves axial or proximal muscles and which causes abnormal fatigability and even permanent muscle weakness. Ragged-red fibers and atrophy are found on muscle biopsy. A large proportion of chronic ophthalmoplegias are associated with other symptoms, leading to a multisystemic pattern of this disease. Additional symptoms are variable, and may include cataracts, hearing loss, sensory axonal neuropathy, ataxia, depression, hypogonadism, and parkinsonism. Note=The disease is caused by mutations affecting the gene represented in this entry.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes the small subunit of a p53-inducible ribonucleotide reductase. This heterotetrameric enzyme catalyzes the conversion of ribonucleoside diphosphates to deoxyribonucleoside diphosphates. The product of this reaction is necessary for DNA synthesis. Mutations in this gene have been associated with autosomal recessive mitochondrial DNA depletion

syndrome, autosomal dominant progressive external ophthalmoplegia-5, and mitochondrial neurogastrointestinal encephalopathy. Alternatively spliced transcript variants have been described.[provided by RefSeq, Feb 2010].

Additional Information

Gene ID	50484
Other Names	MTDPS8A; MTDPS8B; P53R2; RCDFRD; RIR2B_HUMAN; RRM2B; TP53-inducible ribonucleotide reductase M2 B; p53-inducible ribonucleotide reductase small subunit 2-like protein (p53R2); 1.17.4.1; RIR2B_MOUSE; ribonucleotide reductase regulatory TP53 inducible subunit M2B; ribonucleotide reductase M2 B (TP53 inducible)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug /Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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