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| **Product name:** | p53R2 Rabbit Polyclonal Antibody |
| **Cat number:** | ABN15650 |
| **Conjugate:** | Unconjugated |
| **Size:** | 100µL |
| **Clone:** | Polyclonal |
| **Concentration:** | 1mg/ml |
| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Immunogen:** | Synthesized peptide derived from the Internal region of human p53R2. |
| **Reactivity:** | Human,Mouse,Rat |
| **Applications:** | WB 1:500-1:2000,ELISA 1:20000-1:40000 |
| **Molecular Weight:** | 40kDa |
| **Purification:** | Affinity purification |
| **Form:** | Liquid |
| **Buffer:** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N. |
| **Storage:** | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles. |

**Background:**

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],catalytic activity:2'-deoxyribonucleoside diphosphate + thioredoxin disulfide + H(2)O = ribonucleoside diphosphate + thioredoxin.,cofactor:Binds 2 iron ions per subunit.,disease:Defects in RRM2B are the cause of encephalomyopathic mitochondrial depletion syndrome with renal tubulopathy (EMDSRT) [MIM:612075]. Mitochondrial DNA depletion syndrome (MDS) is a clinically heterogeneous group of disorders characterized by a reduction in mitochondrial DNA (mtDNA) copy number. The encephalomyopathic form with renal tubulopathy is presented with various combinations of hypotonia, tubulopathy, seizures, respiratory distress, diarrhea, and lactic acidosis.,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.,induction:In response to DNA damage in a wild-type p53/TP53-dependent manner.,pathway:Genetic information processing; DNA replication.,similarity:Belongs to the ribonucleoside diphosphate reductase small chain family.,subcellular location:Translocates from cytoplasm to nucleus in response to DNA damage.,subunit:Heterotetramer with large (RRM1) subunit. Interacts with p53/TP53. Interacts with RRM1 in response to DNA damage.,tissue specificity:Widely expressed at a high level in skeletal muscle and at a weak level in thymus. Expressed in epithelial dysplasias and squamous cell carcinoma.,