RRM1 Antibody – Mouse Monoclonal

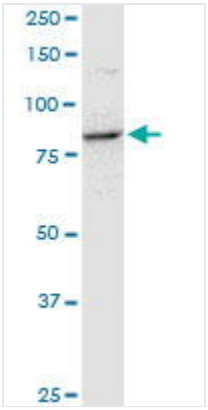
PRODUCT OVERVIEW

NCBI/Uniprot data below describe general gene information for RRM1. It may not necessarily be applicable to this product.

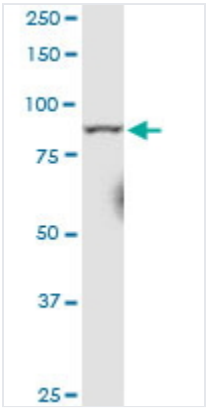
Product Name	RRM1, Monoclonal Antibody
Full Product Name	RRM1 (Ribonucleotide Reductase M1, R1, RIR1, RR1) (HRP)
Product Gene Name	anti-RRM1 antibody
Product Synonym Names	Ribonucleotide Reductase M1; R1; RIR1; RR1
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	2D11
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with horseradish peroxidase (HRP).
Purity/Purification	Purified
Specificity	Recognizes RRM1.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and stor dilutions can be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximu
Chromosome Location	**chromosome:** 11; **Location:**
OMIM	180410
3D Structure	ModBase 3D Structure for P23921
Immunogen	RRM1 (NP_001024.1, 593aa-792aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	IRNSLLIAPMPTASTAQILGNNESIEPYTSNIYTRRVLSGEFQIVNPHLLKDLTERGLWHEEMKNQIIACNGSIQSIPEIPDDLKQLYKTVWEISQKTVLKMAAE
Conjugate	HRP
Product Categories/Family for anti-RRM1 antibody	Antibodies; Enzymes; Reductase
Applications Tested/Suitable for anti-RRM1 antibody	ELISA (EIA), Western Blot (WB)
Application Notes for anti-RRM1 antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-RRM1 antibody	MBS6183016 is an antibody targeting RRM1. Also known as RRM1 (Ribonucleotide Reductase M1, R1, RIR1, RR1) (HRP). Host: Mouse.
Other Notes	Small volumes of anti-RRM1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necess ice and additional dry ice fee may apply.
NCBI GI #	4506749
NCBI GeneID	6240
NCBI Accession #	NP_001024.1
UniProt Primary Accession #	P23921
UniProt Secondary Accession #	Q9UNN2
NCBI Official Full Name	ribonucleoside-diphosphate reductase large subunit [Homo sapiens]
NCBI Official Synonym Full Names	ribonucleotide reductase M1
NCBI Official Symbol	RRM1
NCBI Official Synonym Symbols	R1; RR1; RIR1; RRM1
UniProt Protein Name	Ribonucleoside-diphosphate reductase large subunit
UniProt Synonym Protein Names	Ribonucleoside-diphosphate reductase subunit M1; Ribonucleotide reductase large subunit
UniProt Gene Name	RRM1
UniProt Synonym Gene Names	RR1
UniProt Entry Name	RIR1_HUMAN
UniProt Comments for RRM1	RRM1: an enzyme involved in DNA replication that provides the precursors necessary for DNA synthesis. Catalyzes the biosynthesis of deoxyribonucle and a small subunit. Heterodimer with small subunit RRM2 or RRM2B. The heterodimer with RRM2 has higher catalytic activity than the heterodimer w sites on the M1 subunit. The type of nucleotide bound at the specificity site determines substrate preference. It seems probable that ATP makes the en the activity site. Two distinct regulatory sites have been defined: the specificity site, which controls substrate specificity, and the activity site which regul level of the enzyme activity is closely correlated with the growth rate of a cell and appears to vary with the cell cycle. Patients with advanced non-small Protein type: Nucleotide Metabolism - purine; Other Amino Acids Metabolism - glutathione; DNA replication; EC 1.17.4.1; Nucleotide Metabolism - pyrir Chromosomal Location of Human Ortholog: 11p15.5 Cellular Component: nucleoplasm; cell projection; cell soma; cytoplasm; nuclear envelope; cytosol Molecular Function: protein binding; ATP binding; ribonucleoside-diphosphate reductase activity Biological Process: pyrimidine base metabolic process; nucleobase, nucleoside and nucleotide metabolic process; nucleobase, nucleoside and nucleot biosynthetic process; protein heterotetramerization; mitotic cell cycle; response to ionizing radiation; DNA replication

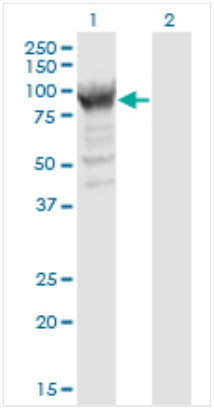
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Western Blot (WB) of anti-RRM1 antibody
RRM1 monoclonal antibody (M08), clone 2D11. Western Blot analysis of RRM1 expression in K-562.



Western Blot (WB) of anti-RRM1 antibody
RRM1 monoclonal antibody (M08), clone 2D11. Western Blot analysis of RRM1 expression in Raw 264.7.



Western Blot (WB) of anti-RRM1 antibody
Western Blot analysis of RRM1 expression in transfected 293T cell line by RRM1 monoclonal antibody (M08), clone 2D11.Lane 1: RRM1 transfected lysate (Predicted MW: 90.1 KDa).Lane 2: Non-transfected lysate.

ADDITIONAL DETAILS

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NCBI GeneID	6240
NCBI Accession #	NP_001024.1
UniProt Primary Accession #	P23921
UniProt Secondary Accession #	Q9UNN2
NCBI Official Full Name	ribonucleoside-diphosphate reductase large subunit [Homo sapiens]
NCBI Official Synonym Full Names	ribonucleotide reductase M1

NCBI Official Symbol	RRM1
NCBI Official Synonym Symbols	R1; RR1; RIR1; RRM1
UniProt Protein Name	Ribonucleoside-diphosphate reductase large subunit
UniProt Synonym Protein Names	Ribonucleoside-diphosphate reductase subunit M1; Ribonucleotide reductase large subunit
UniProt Gene Name	RRM1
UniProt Synonym Gene Names	RR1
UniProt Entry Name	RIR1_HUMAN
UniProt Comments for RRM1	RRM1: an enzyme involved in DNA replication that provides the precursors necessary for DNA synthesis. Catalyzes the biosynthesis of deoxyribonucleotides from the corresponding ribonucleotides. Belongs to the ribonucleoside diphosphate reductase large chain family. Heterodimer of a large and a small subunit. Heterodimer with small subunit RRM2 or RRM2B. The heterodimer with RRM2 has higher catalytic activity than the heterodimer with RRM2B. Under complex allosteric control mediated by deoxynucleoside triphosphates and ATP binding to separate specificity and activation sites on the M1 subunit. The type of nucleotide bound at the specificity site determines substrate preference. It seems probable that ATP makes the enzyme reduce CDP and UDP, dGTP favors ADP reduction and dTTP favors GDP reduction. Stimulated by ATP and inhibited by dATP binding to the activity site. Two distinct regulatory sites have been defined: the specificity site, which controls substrate specificity, and the activity site which regulates overall catalytic activity. A substrate-binding catalytic site, located on M1, is formed only in the presence of the second subunit M2. The level of the enzyme activity is closely correlated with the growth rate of a cell and appears to vary with the cell cycle. Patients with advanced non-small cell lung cancer responded favorably to gemcitabine. Protein type: Nucleotide Metabolism - purine; Other Amino Acids Metabolism - glutathione; DNA replication; EC 1.17.4.1; Nucleotide Metabolism - pyrimidine; Oxidoreductase Chromosomal Location of Human Ortholog: 11p15.5 Cellular Component: nucleoplasm; cell projection; cell soma; cytoplasm; nuclear envelope; cytosol Molecular Function: protein binding; ATP binding; ribonucleoside-diphosphate reductase activity Biological Process: pyrimidine base metabolic process; nucleobase, nucleoside and nucleotide metabolic process; nucleobase, nucleoside and nucleotide interconversion; retina development in camera-type eye; cell proliferation in forebrain; male gonad development; deoxyribonucleotide biosynthetic process; protein heterotetramerization; mitotic cell cycle; response to ionizing radiation; DNA replication
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