PRPS2, PRPS3 (PRPS1) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PRPS1, PRPS2, PRPS3, Polyclonal Antibody
Full Product Name	PRPS1, PRPS2, PRPS3, NT (Ribose-phosphate pyrophosphokinase 1, PPRibP, Phosphoribosyl pyrophosphate synthase I) (MaxLight 750)
Product Gene Name	anti-PRPS1 antibody
Product Synonym Names	Ribose-phosphate pyrophosphokinase 1; PPRibP; Phosphoribosyl pyrophosphate synthase I
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750.
Purity/Purification	Purified by Protein G Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight750 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	27,526 Da
OMIM	300661
3D Structure	ModBase 3D Structure for P60891
Immunogen	PRPS1/PRPS2/PRPS3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 87~116 amino acids from the N-terminal region of human PRPS1/2/3.
Conjugate	MaxLight750
Note	Preservative Free
Product Categories/Family for anti-PRPS1 antibody	Antibodies; Enzymes; Synthase
Applications Tested/Suitable for anti-PRPS1 antibody	Western Blot (WB), FLISA
Application Notes for anti-PRPS1 antibody	WB: 1:100-500 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-PRPS1 antibody	Phosphoribosylpyrophosphate synthetase (PRPS; EC 2.7.6.1) catalyzes the phosphoribosylation of ribose 5-phosphate to 5-phosphoribosyl-1-pyrophosphate, which is necessary for the de novo and salvage pathways of purine, pyrimidine, and pyridine biosynthesis. By PCR of human lymphoblast mRNA using primers based on the cDNA sequence of rat PRS I (Prps1), Roessler et al. (1990) isolated a partial human PRPS1 cDNA. They used this partial cDNA to screen lymphoblast cDNA libraries and isolated additional cDNAs corresponding to the entire PRPS1 coding region. The deduced PRPS1 protein has 318 amino acids.
Product References and Citations for anti-PRPS1 antibody	Roessler, B. J., et al. Nucleic Acids Res. 18: 193 (1990).

Other Notes	Small volumes of anti-PRPS1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PRPS1 purchase	MBS6337675 is an antibody targeting PRPS1. Also known as PRPS1, PRPS2, PRPS3, NT (Ribose-phosphate pyrophosphokinase 1, PPRibP, Phosphoribosyl pyrophosphate synthase I) (MaxLight 750). Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PRPS1. It may not necessarily be applicable to this product.

NCBI GI #	324711015
NCBI GeneID	5631
NCBI Accession #	NP_001191331.1
UniProt Primary Accession #	P60891
UniProt Secondary Accession #	P09329; B1ALA8; B2R6T7; B4DNL6; D3DUX6
UniProt Related Accession #	P60891
GenBank Nucleotide #	NM_001204402.1
NCBI Official Full Name	ribose-phosphate pyrophosphokinase 1 isoform 2
NCBI Official Synonym Full Names	phosphoribosyl pyrophosphate synthetase 1
NCBI Official Symbol	PRPS1
NCBI Official Synonym Symbols	ARTS; DFN2; PRSI; CMTX5; DFNX1; PRS-I; PPRibP
UniProt Protein Name	Ribose-phosphate pyrophosphokinase 1
UniProt Synonym Protein Names	PPRibP; Phosphoribosyl pyrophosphate synthase I; PRS-I
UniProt Gene Name	PRPS1
UniProt Synonym Gene Names	PRS-I
UniProt Entry Name	PRPS1_HUMAN
NCBI Protein Information	ribose-phosphate pyrophosphokinase 1; dJ1070B1.2 (phosphoribosyl pyrophosphate synthetase 1); deafness 2, perceptive, congenital; deafness, X-linked 2, perceptive, congenital; phosphoribosyl pyrophosphate synthase I; ribose-phosphate diphosphokinase 1
NCBI Summary for PRPS1	This gene encodes an enzyme that catalyzes the phosphoribosylation of ribose 5-phosphate to 5-phosphoribosyl-1-pyrophosphate, which is necessary for purine metabolism and nucleotide biosynthesis. Defects in this gene are a cause of phosphoribosylpyrophosphate synthetase superactivity, Charcot-Marie-Tooth disease X-linked recessive type 5 and Arts Syndrome. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2011]

UniProt Comments for PRPS1	PRPS1: Catalyzes the synthesis of phosphoribosylpyrophosphate (PRPP) that is essential for nucleotide synthesis. Defects in PRPS1 are the cause of phosphoribosylpyrophosphate synthetase superactivity (PRPS1 superactivity); also known as PRPS-related gout. It is a familial disorder characterized by excessive purine production, gout and uric acid urolithiasis. Defects in PRPS1 are the cause of Charcot-Marie-Tooth disease X-linked recessive type 5 (CMTX5); also known as optic atrophy-polyneuropathy-deafness or Rosenberg-Chutorian syndrome. CMTX5 is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathies characterized by severely reduced motor nerve conduction velocities (NCVs) (less than 38m/s) and segmental demyelination and remyelination, and primary peripheral axonal neuropathies characterized by normal or mildly reduced NCVs and chronic axonal degeneration and regeneration on nerve biopsy. Defects in PRPS1 are the cause of ARTS syndrome (ARTS); also known as fatal ataxia X-linked with deafness and loss of vision. ARTS is a disorder characterized by mental retardation, early-onset hypotonia, ataxia, delayed motor development, hearing impairment, and optic atrophy. Susceptibility to infections, especially of the upper respiratory tract, can result in early death. Defects in PRPS1 are the cause of deafness X-linked type 1 (DFNX1); also known as congenital sensorineural deafness X-linked 2 (DFN2). It is a form of deafness characterized by progressive, severe-to-profound sensorineural hearing loss in males. Females manifest mild to moderate hearing loss. Belongs to the ribose-phosphate pyrophosphokinase family. Protein type: Nucleotide Metabolism - purine; Carbohydrate Metabolism - pentose phosphate pathway; EC 2.7.6.1; Kinase, other Chromosomal Location of Human Ortholog: Xq22.3 Cellular Component: cytosol Molecular Function: ribose phosphate diphosphokinase activity; protein homodimerization activity; magnesium ion binding; kinase activity; ATP binding Biological Process: nervous system development; hypoxanthine biosynthetic process; carbohydrate metabolic process; 5-phosphoribose 1-diphosphate biosynthetic process; ribonucleoside monophosphate biosynthetic process; pathogenesis; purine nucleotide biosynthetic process; phosphorylation; purine base metabolic process; pyrimidine nucleotide biosynthetic process Disease: Charcot-marie-tooth Disease, X-linked Recessive, 5; Arts Syndrome; Phosphoribosylpyrophosphate Synthetase Superactivity
Research Articles on PRPS1	**1.** respective phenotypic presentation seems to be determined by the exact PRPS1 mutation and the residual enzyme activity, the latter being largely influenced by the degree of skewed X-inactivation
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