PKLR Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	PKLR, Blocking Peptide
Full Product Name	PKLR Blocking Peptide
Product Gene Name	PKLR blocking peptide
Product Synonym Names	EC 2.7.1.40; KPYR_HUMAN; L-PK; Pk-1; PK1; PKL; Pklg; Pklr; PKR; PKRL; Pyruvate kinase 1; Pyruvate kinase isozymes R/L; Pyruvate kinase liver and blood cell; Pyruvate kinase liver and RBC; Pyruvate kinase liver and red blood cell; Pyruvate kinase liver type; Pyruvate kinase type L; Pyruvate kinase, red cell type; R type/L type pyruvate kinase; R-PK; R-type/L-type pyruvate kinase; Red cell/liver pyruvate kinase; RPK
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	PKLR peptide (MBS9620926) is used for blocking the activity of PKLR antibody (MBS9603449)
Molecular Weight	58,494 Da
OMIM	102900
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for PKLR blocking peptide	Blocking/Control
Related Product Information for PKLR blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of PKLR blocking peptide 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 PKLR purchase	MBS9620926 is a blocking peptide targeting PKLR.

ADDITIONAL DETAILS

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

NCBI GI #	10835121
NCBI GeneID	5313
NCBI Accession #	NP_000289.1
UniProt Primary Accession #	P30613

UniProt Secondary Accession #	O75758; P11973
UniProt Related Accession #	P30613
GenBank Nucleotide #	NM_000298.6
NCBI Official Full Name	pyruvate kinase PKLR isoform 1
NCBI Official Synonym Full Names	pyruvate kinase, liver and RBC
NCBI Official Symbol	PKLR
NCBI Official Synonym Symbols	PK1; PKL; PKR; RPK; PKRL
UniProt Protein Name	Pyruvate kinase PKLR
UniProt Synonym Protein Names	Pyruvate kinase 1; Pyruvate kinase isozymes L/R; R-type/L-type pyruvate kinase; Red cell/liver pyruvate kinase
Protein Family	Pyruvate kinase
UniProt Gene Name	PKLR
UniProt Synonym Gene Names	PK1; PKL
UniProt Entry Name	KPYR_HUMAN
NCBI Protein Information	pyruvate kinase PKLR; R-type/L-type pyruvate kinase; pyruvate kinase 1; pyruvate kinase isozyme R/L; pyruvate kinase isozymes L/R; pyruvate kinase isozymes R/L; pyruvate kinase type L; pyruvate kinase, liver and blood cell; red cell/liver pyruvate kinase
NCBI Summary for PKLR	The protein encoded by this gene is a pyruvate kinase that catalyzes the transphosphorylation of phohsphoenolpyruvate into pyruvate and ATP, which is the rate-limiting step of glycolysis. Defects in this enzyme, due to gene mutations or genetic variations, are the common cause of chronic hereditary nonspherocytic hemolytic anemia (CNSHA or HNSHA). Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for PKLR	PKLR: one of three rate-limiting enzymes in glycolysis. It catalyzes the transfer of a phosphate group from phosphoenolpyruvate (PEP) to ADP, yielding one molecule ATP and a pyruvate molecule, which is a central metabolic intermediate that can be used as a building block or oxidized further. There are several mammalian isozymes of pyruvate kinase encoded by different genes. The L type predominates in liver, and the M type in muscle and brain. Two alternatively spliced human isoforms have been described: the R- and L-types. Protein type: Carbohydrate Metabolism - pyruvate; Carbohydrate Metabolism - glycolysis and gluconeogenesis; Kinase, other; Nucleotide Metabolism - purine; EC 2.7.1.40 Chromosomal Location of Human Ortholog: 1q21 Cellular Component: cytosol Molecular Function: potassium ion binding; magnesium ion binding; pyruvate kinase activity; ATP binding Biological Process: pyruvate biosynthetic process; glycolysis; response to cAMP; response to lithium ion; positive regulation of cellular metabolic process; glucose metabolic process; pathogenesis; response to other organism; endocrine pancreas development; response to ATP; cellular response to insulin stimulus; response to heat; ATP biosynthetic process; carbohydrate metabolic process; response to hypoxia; energy reserve metabolic process; response to glucose stimulus; phosphorylation; response to nutrient Disease: Adenosine Triphosphate, Elevated, Of Erythrocytes; Pyruvate Kinase Deficiency Of Red Cells
Research Articles on PKLR	**1.** 11 patients from 10 unrelated pyruvate kinse deficiency families had 9 different disease-causing PKLR mutations, including 2 new ones: the point mutation c.878A>T (p.Asp293Val) and the frameshift deletion c.1553delG (p.(Arg518Leufs*12).

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