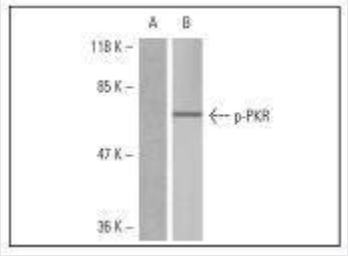
PKR Antibody – Rabbit Polyclonal

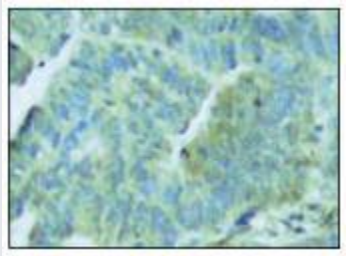
PRODUCT OVERVIEW

Product Name	PKR, Polyclonal Antibody
Full Product Name	PKR (Phospho-Thr446) Antibody
Product Gene Name	anti-PKR antibody
Product Synonym Names	Double stranded RNA activated protein kinase; antibody; E2AK2_HUMAN antibody; eIF-2A protein kinase 2 antibody; EIF2AK1 antibody; EIF2AK2 antibody; Eukaryotic translation initiation factor 2 alpha kinase 2 antibody; Eukaryotic translation initiation factor 2-alpha kinase 2 antibody; HGNC:9437 antibody; Interferon induced double stranded RNA activated protein kinase antibody; Interferon inducible eIF2 alpha kinase antibody; Interferon inducible RNA dependent protein kinase antibody; Interferon-induced; double-stranded RNA-activated protein kinase antibody; Interferon-inducible RNA-dependent protein kinase antibody; MGC126524 antibody; P1/eIF-2A protein kinase antibody; P1/eIF2A protein kinase antibody; p68 kinase antibody; PKR antibody; PPP1R83 antibody; PRKR antibody; Protein kinase interferon inducible double stranded RNA dependent antibody; Protein kinase RNA activated antibody; Protein kinase RNA-activated antibody; Protein phosphatase 1 regulatory subunit 83 antibody; Serine/threonine protein kinase TIK antibody; Tyrosine protein kinase EIF2AK2 antibody
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	1*TBS (pH7.4), 1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Purity/Purification	Immunogen affinity purified
Preparation and Storage	Store at -20 degree C.
Molecular Weight	62,094 Da
Chromosome Location	Chromosome: 2; NC_000002.11 (37332281..37384190, complement). Location: 2p22-p21
OMIM	176871
3D Structure	ModBase 3D Structure for P19525
Immunogen	Amino acid sequence containing phosphorylated Thr 446 of PKR of human origin.
Conjugation	Unconjugated
Product Categories/Family for anti-PKR antibody	Phospho-specific Ab
Applications Tested/Suitable for anti-PKR antibody	Western Blot (WB), Immunoprecipitation (IP), Immunofluorescence (IF),Immunohistochemistry (IHC)
Application Notes for anti-PKR antibody	WB: 1:100-1:1000 IHC: 1:50-500 IP: 1-2ug per 100-500ug of total protein (1 ml of cell lysate)

Related Product Information for anti-PKR antibody	An interferon-inducible, RNA-dependent protein serine/threonine kinase, PKR has various designations. Mouse PKR is known as DAI, dsJ, PI kinase, p65, p67 or TIK, whereas human PKR is known as p68 or p69. PKR phosphorylates its substrate, a subunit of protein synthesis initiation factor eIF-2 on Ser 51 to inhibit translation. PKR contains two dsRNA binding motifs required for its activation by dsRNA. Three kinds of regulation of PKR enzymatic activity occur, and these include transcriptional regulation in response to interferon, an autoregulatory mechanism controlling PKR expression at the level of translation, and posttranslational regulation by RNA mediated autophosphorylation. Human PKR contains at least 15 autophosphorylation sites, but only Thr-446 and Thr-451 in the activation loop are critical for its kinase activity. Thr-446 is the in vivo autophosphorylation site of PKR. Mutation of threonine to alanine at position 446 substantially reduces PKR function, and mutant kinase containing Ala-451 is completely inactive.
Other Notes	Small volumes of anti-PKR 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 PKR purchase	MBS9430994 is an antibody targeting PKR. Also known as PKR (Phospho-Thr446) Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-PKR antibody
Western blot analysis of phosphorylated PKR expression in K-562 (A) and starved K-562 (B) whole cell lysates.



Testing Data of anti-PKR antibody
Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon carcinoma tissue showing cytoplasmic staining.

ADDITIONAL DETAILS

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

NCBI GI #	208431827
NCBI GeneID	5610
NCBI Accession #	NP_001129123.1
UniProt Primary Accession #	P19525
UniProt Secondary Accession #	Q52M43; Q7Z6F6; Q9UIR4; A8K3P0; D6W584; E9PC80
UniProt Related Accession #	P19525
GenBank Nucleotide #	NM_001135651.2
NCBI Official Full Name	interferon-induced, double-stranded RNA-activated protein kinase isoform a
NCBI Official Synonym Full Names	eukaryotic translation initiation factor 2-alpha kinase 2
NCBI Official Symbol	EIF2AK2
NCBI Official Synonym Symbols	PKR; PRKR; EIF2AK1
UniProt Protein Name	Interferon-induced, double-stranded RNA-activated protein kinase
UniProt Synonym Protein Names	Eukaryotic translation initiation factor 2-alpha kinase 2; eIF-2A protein kinase 2; Interferon-inducible RNA-dependent protein kinase; P1/eIF-2A protein kinase; Protein kinase RNA-activated; PKR; Tyrosine-protein kinase EIF2AK2 (EC:2.7.10.2); p68 kinase
Protein Family	Interferon-inducible double-stranded RNA-dependent protein kinase activator
UniProt Gene Name	EIF2AK2

UniProt Synonym Gene Names	PKR; PRKR; eIF-2A protein kinase 2; PKR
UniProt Entry Name	E2AK2_HUMAN
NCBI Protein Information	interferon-induced, double-stranded RNA-activated protein kinase; p68 kinase; eIF-2A protein kinase 2; P1/eIF-2A protein kinase; tyrosine-protein kinase EIF2AK2; interferon-inducible eIF2alpha kinase; double stranded RNA activated protein kinase; protein
NCBI Summary for PKR	The protein encoded by this gene is a serine/threonine protein kinase that is activated by autophosphorylation after binding to dsRNA. The activated form of the encoded protein can phosphorylate translation initiation factor EIF2S1, which in turn inhibits protein synthesis. This protein is also activated by manganese ions and heparin. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Oct 2011]
UniProt Comments for PKR	PKR: a protein kinase of the PEK family. Upon binding double-stranded RNA, it becomes autophosphorylated and activated. Phosphorylates and inhibits the alpha subunit of eIF2 alpha, which leads to an inhibition of the initiation of protein synthesis. Controls the activation of several transcription factors such as NF-kappaB, p53 and Stats. Mediates apoptosis induced by many different stimuli, such as LPS, TNF-alpha, viral infection and serum starvation. Protein type: Kinase, protein; Translation; EC 2.7.11.1; Protein kinase, Other; EC 2.7.10.2; Protein kinase, Ser/Thr (non-receptor); Other group; PEK family Chromosomal Location of Human Ortholog: 2p22-p21 Cellular Component: membrane; perinuclear region of cytoplasm; cytoplasm; ribosome; nucleus; cytosol Molecular Function: protein serine/threonine kinase activity; protein binding; double-stranded RNA binding; non-membrane spanning protein tyrosine kinase activity; protein phosphatase type 2A regulator activity; ATP binding; eukaryotic translation initiation factor 2alpha kinase activity; protein kinase activity Biological Process: positive regulation of cytokine production; peptidyl-tyrosine phosphorylation; translation; transcription, DNA-dependent; activation of MAPKK activity; unfolded protein response; response to virus; protein amino acid autophosphorylation; viral infectious cycle; protein amino acid phosphorylation; positive regulation of stress-activated MAPK cascade; positive regulation of chemokine production; evasion by virus of host immune response; activation of NF-kappaB transcription factor; negative regulation of cell proliferation; negative regulation of viral genome replication; modification by virus of host cellular process; virus-host interaction; negative regulation of translation; innate immune response; negative regulation of osteoblast proliferation; defense response to virus; negative regulation of apoptosis
Research Articles on PKR	**1.** evidence that type 1 diabetes (DMT1) is response to viral infection: Data suggest that presence of immunoreactive enteroviral VP1 within pancreatic beta cells in DMT1 is associated with induction of PKR (and down-regulation of bcl-2-like protein 3).
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