

Product Name: PKR (phospho Thr446) Rabbit Polyclonal Antibody
Catalog #: APRab05279

Summary

Production Name	PKR (phospho Thr446) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human,Rat,Mouse

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	EIF2AK2
Alternative Names	EIF2AK2; PKR; PRKR; Interferon-induced; double-stranded RNA-activated protein kinase; Eukaryotic translation initiation factor 2-alpha kinase 2; eIF-2A protein kinase 2; Interferon-inducible RNA-dependent protein kinase; P1/eIF-2A protein k
Gene ID	5610.0
SwissProt ID	P19525.The antiserum was produced against synthesized peptide derived from human PKR around the phosphorylation site of Thr446. AA range:413-462

Application

Dilution Ratio	WB 1:500 - 1:2000. ELISA: 1:10000
Molecular Weight	62kD

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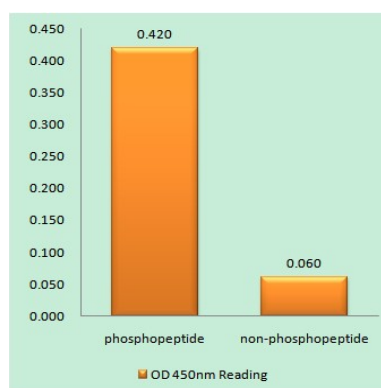


Background

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],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Activity is markedly stimulated by manganese ions. Besides dsRNA, heparin is a potent activator of the kinase. Binding to dsRNA is required for dimerization leading to autophosphorylation in the activation loop and stimulation of function. Inhibited by vaccinia virus protein E3, probably via dsRNA sequestering.,function:Following activation by double-stranded RNA in the presence of ATP, the kinase becomes autophosphorylated and can catalyze the phosphorylation of the translation initiation factor EIF2S1, which leads to an inhibition of the initiation of protein synthesis. Double-stranded RNA is generated during the course of a viral infection.,induction:By interferon.,PTM:Autophosphorylated on several Ser and Thr residues. Autophosphorylation of Thr-451 is dependent on Thr-446 and is stimulated by dsRNA binding and dimerization. Autophosphorylation apparently leads to the activation of the kinase.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. GCN2 subfamily.,similarity:Contains 1 protein kinase domain.,similarity:Contains 2 DRBM (double-stranded RNA-binding) domains.,subunit:Homodimer. Interacts with STRBP (By similarity). Interacts with DNAJC3. Inhibited by direct interaction with viral proteins such as HCV E2, HCV NS5A and influenza A NS1. Activated by the interaction with HIV-1 Tat.,

Research Area

Image Data

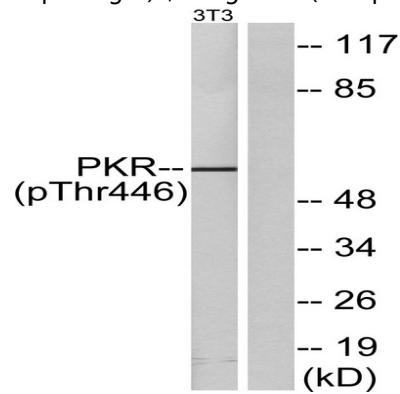


Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-

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Phosphopeptide (Phospho-right) , using PKR (Phospho-Thr446) Antibody



Western blot analysis of lysates from NIH/3T3 cells treated with IFN 2500U/ml 30 ', using PKR (Phospho-Thr446) Antibody. The lane on the right is blocked with the phospho peptide.

Note

For research use only.