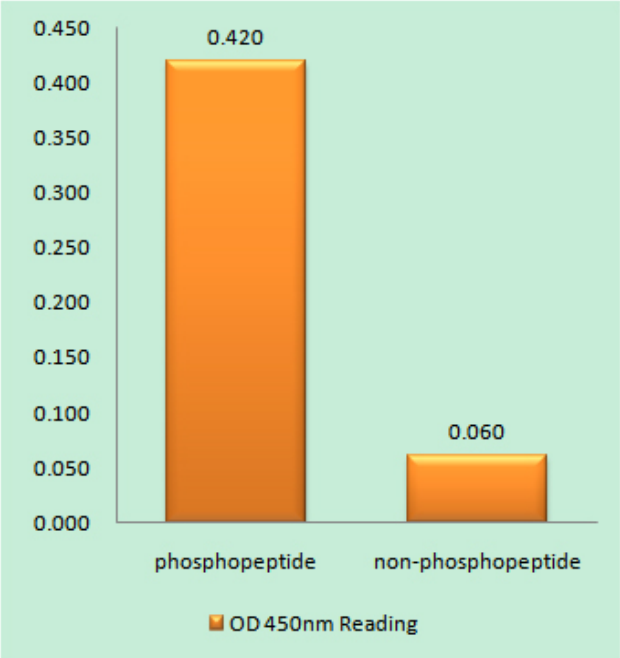
PKR (phospho Thr446) Polyclonal Antibody

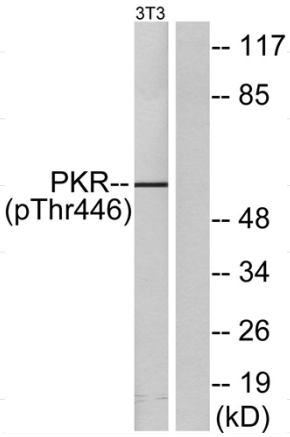
Catalog No	YP-Ab-14345
Isotype	IgG
Reactivity	Human;Rat;Mouse;
Applications	WB;ELISA
Gene Name	EIF2AK2
Immunogen	The antiserum was produced against synthesized peptide derived from human PKR around the phosphorylation site of Thr446. AA range:413-462
Specificity	Phospho-PKR (T446) Polyclonal Antibody detects endogenous levels of PKR protein only when phosphorylated at T446.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	EIF2AK2;PKR;Interferon-induced;double-stranded RNA-activated protein kinase; Eukaryotic;Interferon-induced double-stranded RNA-activated protein kinase; PRKR;Eukaryotic translation initiation factor 2-alpha kinase 2;eIF-2A protein kinase 2;Interferon-inducible RNA-dependent protein kinase;P1/eIF-2A protein k
Observed Band	62kD
Calculated Molecular Weight	62kD
Cell Pathway	Cytoplasm . Nucleus . Cytoplasm, perinuclear region . Nuclear localization is elevated in acute leukemia, myelodysplastic syndrome (MDS), melanoma, breast, colon, prostate and lung cancer patient samples or cell lines as well as neurocytes from advanced Creutzfeldt-Jakob disease patients. .
Tissue Specificity	Highly expressed in thymus, spleen and bone marrow compared to non-hematopoietic tissues such as small intestine, liver, or kidney tissues. Colocalizes with GSK3B and TAU in the Alzheimer disease (AD) brain. Elevated levels seen in breast and colon carcinomas, and which correlates with tumor progression and invasiveness or risk of progression.

Function	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 bindin
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],
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

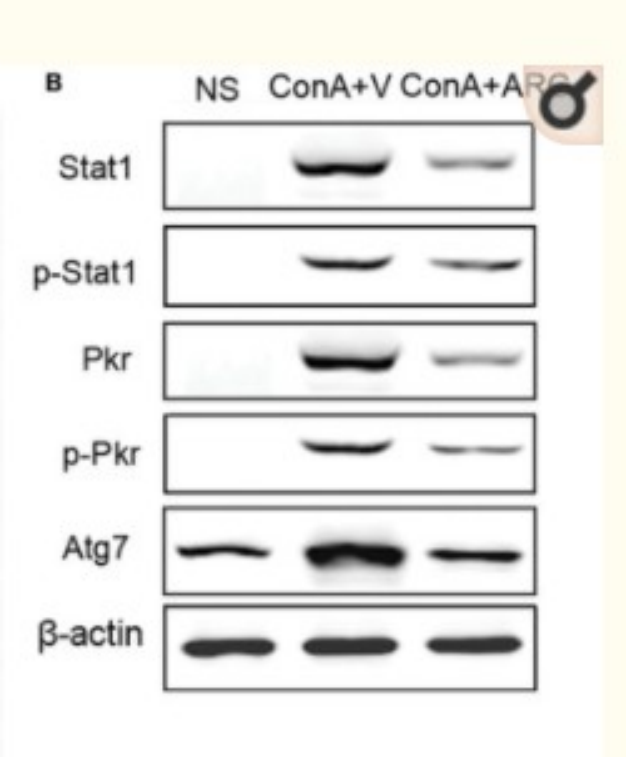
Products Images



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



Feng, Qin. "Quantitative proteomic analysis reveals that Arctigenin alleviates concanavalin A-induced hepatitis through suppressing immune system and regulating autophagy." Frontiers in immunology 9 (2018): 1881.