

**PKR (phospho Thr451) Polyclonal Antibody**

<b>Catalog No :</b>	YP0233
<b>Reactivity :</b>	Human;Rat;Mouse;
<b>Applications :</b>	IHC;IF;ELISA
<b>Target :</b>	PKR
<b>Fields :</b>	>>Protein processing in endoplasmic reticulum;>>Necroptosis;>>Alzheimer disease;>>Hepatitis C;>>Measles;>>Influenza A;>>Human papillomavirus infection;>>Kaposi sarcoma-associated herpesvirus infection;>>Herpes simplex virus 1 infection;>>Epstein-Barr virus infection;>>Coronavirus disease - COVID-19;>>Viral carcinogenesis
<b>Gene Name :</b>	EIF2AK2
<b>Protein Name :</b>	Interferon-induced double-stranded RNA-activated protein kinase
<b>Human Gene Id :</b>	5610
<b>Human Swiss Prot No :</b>	P19525
<b>Mouse Swiss Prot No :</b>	Q03963
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human PKR around the phosphorylation site of Thr451. AA range:418-467
<b>Specificity :</b>	Phospho-PKR (T451) Polyclonal Antibody detects endogenous levels of PKR protein only when phosphorylated at T451.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IHC 1:100 - 1:300. ELISA: 1:20000.. IF 1:50-200
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

**Concentration :** 1 mg/ml

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**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

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**Molecularweight :** 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],

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**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

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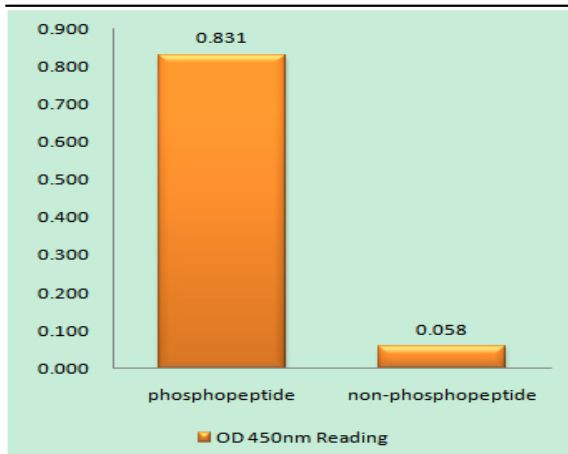
**Subcellular Location :** Cytoplasm . Nucleus . Cytoplasm, perinuclear region . Nuclear localization is elevated in acute leukemia, myelodysplastic syndrome (MDS), melanoma, breast, colon, prostate and lung cancer patient samples or cell lines as well as neurocytes from advanced Creutzfeldt-Jakob disease patients. .

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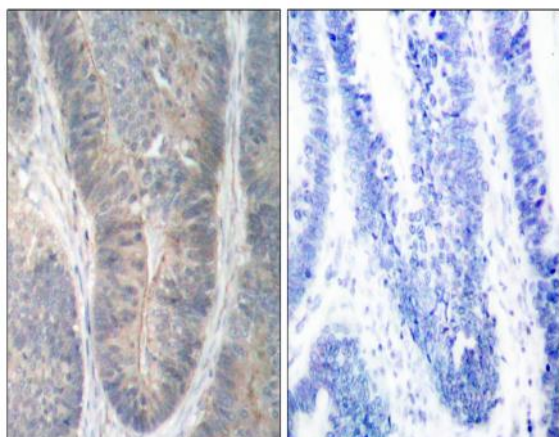
**Expression :** Highly expressed in thymus, spleen and bone marrow compared to non-hematopoietic tissues such as small intestine, liver, or kidney tissues. Colocalizes with GSK3B and TAU in the Alzheimer disease (AD) brain. Elevated levels seen in breast and colon carcinomas, and which correlates with tumor progression and invasiveness or risk of progression.

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## Products Images



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using PKR (Phospho-Thr451) Antibody



Immunohistochemistry analysis of paraffin-embedded human colon carcinoma, using PKR (Phospho-Thr451) Antibody. The picture on the right is blocked with the phospho peptide.