PKR (Phospho Thr451) Rabbit pAb

CatalogNo: YP0233

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- IHC,IF,ELISA

MW
- 62kD (Calculated)

Isotype
- IgG

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

IHC 1:100-1:300
ELISA 1:20000
IF 1:50-200

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human PKR around the phosphorylation site of Thr451. AA range:418-467
Specificity	Phospho-PKR (T451) Polyclonal Antibody detects endogenous levels of PKR protein only when phosphorylated at T451.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):KGtLR

Target Information

Gene name EIF2AK2

Protein Name Interferon-induced double-stranded RNA-activated protein kinase

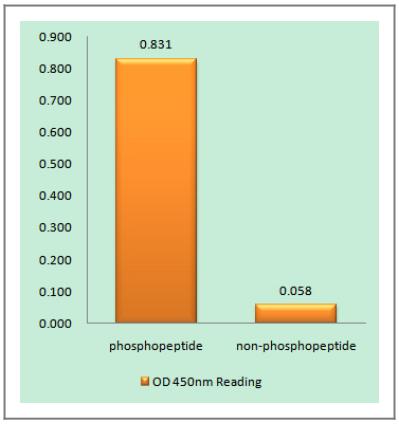
Organism	Gene ID	UniProt ID
Human	5610;	P19525;
Mouse		Q03963;

Cellular Localization 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. .

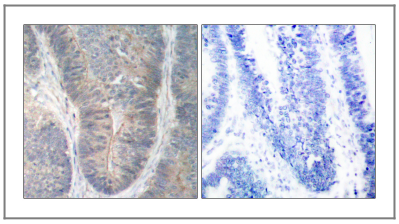
Tissue specificity Highly expressed in thymus , spleen and bone marrow compared to non-hematopoietic tissues such as small intestine , liver , or kidney tissues. Colocalizes with GSK3B and TAU in the Alzheimer disease (AD) brain. Elevated levels seen in breast and colon carcinomas , and which correlates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

Validation Data



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.

Contact information

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Please scan the QR code to access additional product information:
PKR (Phospho Thr451) Rabbit pAb

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