

PKR (PT0673R) PT™ Rabbit mAb

CatalogNo: YM8231 **Recombinant** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC, IF, IP, ELISA

MW

- 62kD (Calculated)
- 62kD (Observed)

Isotype

- IgG, Kappa

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)**Formulation** PBS, 50% glycerol, 0.05% Proclin 300, 0.05% BSA

Recommended Dilution Ratios

IHC 1:200-1:1000**WB 1:1000-1:5000****IF 1:200-1:1000****ELISA 1:5000-1:20000****IP 1:50-1:200,**

Basic Information

Clonality Monoclonal**Clone Number** PT0673R

Immunogen Information

Specificity Endogenous

| Target Information

Gene name EIF2AK2

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

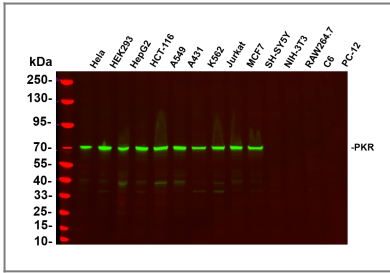
Organism	Gene ID	UniProt ID
Human	11200 ;	P19525 ;
Mouse		Q03963 ;

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. .

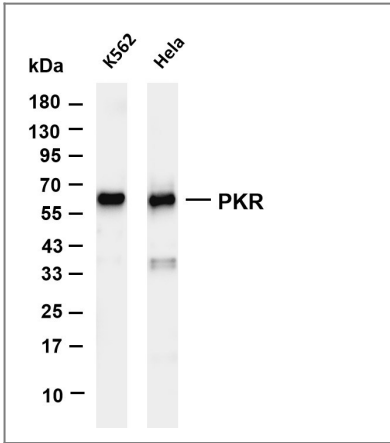
Tissue specificity High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.

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.,

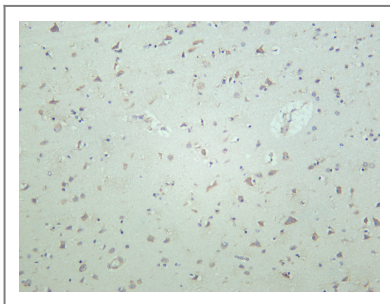
| Validation Data



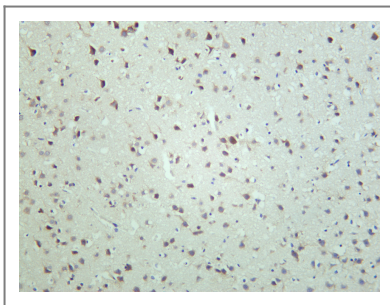
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4°C, over night with a 1:5000 dilution . The Dylight 800-conjugated Goat anti-Rabbit antibody(Cat:RS23920) was used to detect the antibody. Lane1: HeLa - Human cervical cancer Lane2: HEK293 - Human normal embryonic kidney Lane3: HepG2 - Human hepatocellular carcinoma Lane4: HCT-116 - Human colon cancer Lane5: A549 - Human lung adenocarcinoma Lane6: A431 - Human skin squamous cell carcinoma Lane7: K562 - Human chronic myeloid leukemia Lane8: Jurkat - Human acute T cell leukemia cells Lane9: MCF7 - Human breast cancer Lane10: SH-SY5Y - Human neuroblastoma cells Lane11: NIH-3T3 - NIH mouse fibroblasts Lane12: RAW264.7 - Mouse mononuclear macrophage leukemia cells Lane13: C6 - Rat glioma cells Lane14: PC-12 - Pheochromocytoma in rats Predicted band size: 62-70kDa Observed band size: 70kDa



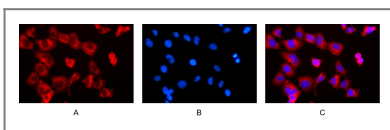
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PKR antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: K562 Lane 2: HeLa Predicted band size: 62kDa Observed band size: 62kDa



Human brain was stained with anti-PKR rabbit antibody



Rat brain was stained with anti-PKR rabbit antibody



Immunofluorescence analysis of HEK293. Picture A: PKR antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

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Rabbit mAb

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