SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-EIF2AK2 (PKR)antibody

Catalog Number: SL1493R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	EIF2AK2 (PKR)
Immunogen:	KLH conjugated synthetic peptide derived from human PKR: 251-360/551
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Rat(predicted:Human,Mouse)
Predicted MW.:	61kDa
Subcellular Location:	cytoplasmic
Background:	PKR is an interferon-inducible serine/threonine specific protein kinase. It is widely expressed in eukaryotic organisms and activated by double stranded RNA. Activation of PKR by dsRNAs leads to autophosphorylation at multiple sites. Phosphorylation of Thr446 and Thr451 in the PKR activation loop is required in vivo and in vitro for high level kinase activity. PKR phosphorylates its natural substrate, the alpha subunit of eukaryotic protein synthesis initiation factor 2 (EIF2 alpha), leading to the inhibition of protein synthesis. PKR is also involved in TLR signaling and mediates apoptosis in fibroblasts in response to viral infection and inflammatory cytokines, and also activates IKK and NFKB, thereby suppressing apoptosis. Recently, it has been reported that PKR also phosphorylates human p53 on serine 392. PKR might play a role in ER stress-induced apoptosis and in

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	Alzheimer's disease. Alzheimer cases show prominent PKR activation in association with neuritic plaques and pyramidal neurons in the hippocampus and neocortex. **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. **Subunit:** Homodimer. Interacts with STRBP. 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. Forms a complex with FANCA, FANCC, FANCG and HSP70. **Post-translational modifications:** 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. Ser/Thr protein kinase family. GCN2 subfamily. Contains 2 DRBM (double-stranded RNA-binding) domains. Contains 1 protein kinase domain. **Database links:** **Entrez Gene:** 5610 Human Omim: 176871 Human **SwissProt:** P19525 Human **Unigene:** 131431 Human Protein kinase R/double-stranded RNA-dependent protein kinase (PKR) is an Interferon-induced, double-stranded RNA-activated serine/threonine kinase, PKRIt plays an important role in Signal transduction and the control of cell growth, differentiation, and apoptosis. Some also consider PKR to be an important apoptotic effector,It is a transducer of apoptosis induced by many different stimuli。

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[VALIDATION IMAGES]

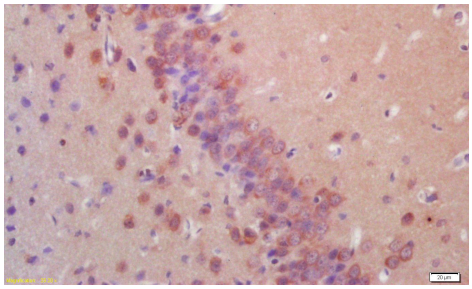


Figure 1. Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-EIF2AK2/PKR Polyclonal Antibody, Unconjugated(SL1493R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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