



Datasheet for ABIN744788  
**anti-EIF2AK2 antibody (pThr446)**



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3 Images

Overview

Quantity:	100 µL
Target:	EIF2AK2
Binding Specificity:	pThr446
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This EIF2AK2 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic phosphopeptide derived from human PKR around the phosphorylation site of Thr446
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Purified by Protein A.

Target Details

Target:	EIF2AK2
Alternative Name:	PKR ( <a href="#">EIF2AK2 Products</a> )

## Target Details

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**Background:** Synonyms: PKR, PRKR, EIF2AK1, PPP1R83, Interferon-induced, double-stranded RNA-activated protein kinase, Eukaryotic translation initiation factor 2-alpha kinase 2, eIF-2A protein kinase 2, Interferon-inducible RNA-dependent protein kinase, P1/eIF-2A protein kinase, Protein kinase RNA-activated, Protein kinase R, Tyrosine-protein kinase EIF2AK2, p68 kinase, EIF2AK2

**Background:** IFN-induced dsRNA-dependent serine/threonine-protein kinase which plays a key role in the innate immune response to viral infection and is also involved in the regulation of signal transduction, apoptosis, cell proliferation and differentiation. Exerts its antiviral activity on a wide range of DNA and RNA viruses including hepatitis C virus (HCV), hepatitis B virus (HBV), measles virus (MV) and herpes simplex virus 1 (HHV-1). Inhibits viral replication via phosphorylation of the alpha subunit of eukaryotic initiation factor 2 (EIF2S1), this phosphorylation impairs the recycling of EIF2S1 between successive rounds of initiation leading to inhibition of translation which eventually results in shutdown of cellular and viral protein synthesis. Also phosphorylates other substrates including p53/TP53, PPP2R5A, DHX9, ILF3, IRS1 and the HHV-1 viral protein US11. In addition to serine/threonine-protein kinase activity, also has tyrosine-protein kinase activity and phosphorylates CDK1 at 'Tyr-4' upon DNA damage, facilitating its ubiquitination and proteosomal degradation. Either as an adapter protein and/or via its kinase activity, can regulate various signaling pathways (p38 MAP kinase, NF-kappa-B and insulin signaling pathways) and transcription factors (JUN, STAT1, STAT3, IRF1, ATF3) involved in the expression of genes encoding proinflammatory cytokines and IFNs. Activates the NF-kappa-B pathway via interaction with IKBKB and TRAF family of proteins and activates the p38 MAP kinase pathway via interaction with MAP2K6. Can act as both a positive and negative regulator of the insulin signaling pathway (ISP). Negatively regulates ISP by inducing the inhibitory phosphorylation of insulin receptor substrate 1 (IRS1) at 'Ser-312' and positively regulates ISP via phosphorylation of PPP2R5A which activates FOXO1, which in turn up-regulates the expression of insulin receptor substrate 2 (IRS2).

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Gene ID: 5610

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UniProt: [P19525](#)

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Pathways: [DNA Damage Repair](#), [ER-Nucleus Signaling](#), [Hepatitis C](#)

## Application Details

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Application Notes: WB 1:300-5000  
ELISA 1:500-1000  
IHC-P 1:200-400  
IHC-F 1:100-500

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## Application Details

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IF(IHC-P) 1:50-200

IF(IHC-F) 1:50-200

IF(ICC) 1:50-200

Restrictions: For Research Use only

## Handling

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Format: Liquid

Concentration: 1 µg/µL

Buffer: 0.01M TBS( pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

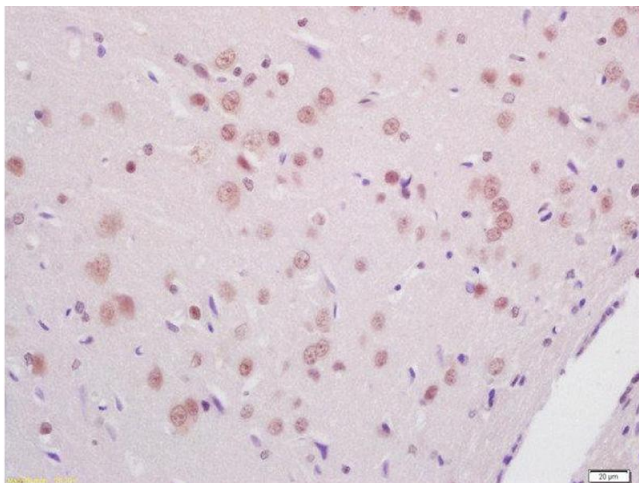
Storage: 4 °C,-20 °C

Storage Comment: Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Expiry Date: 12 months

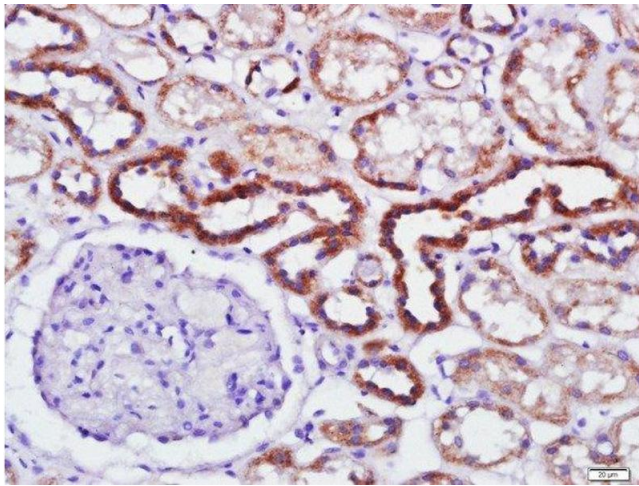
## Images

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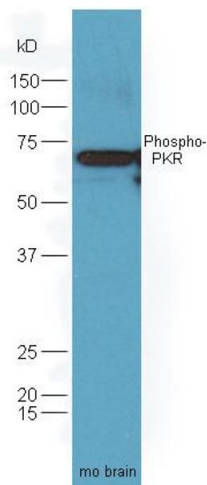
### Immunohistochemistry (Paraffin-embedded Sections)

**Image 1.** Formalin-fixed and paraffin embedded rat brain tissue labeled with Anti-PKR (Thr446) Polyclonal Antibody, Unconjugated(ABIN744788) 1:200 followed by conjugation to the secondary antibody and DAB staining



### Immunohistochemistry (Paraffin-embedded Sections)

**Image 2.** Paraformaldehyde-fixed, paraffin embedded human kidney tissue, Antigen retrieval by boiling in sodium citrate buffer(pH6) for 15min, Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes, Blocking buffer (normal goat serum) at 37°C for 20min, Antibody incubation with Rabbit Anti-PKR(Thr446) Polyclonal Antibody, Unconjugated at 1:500 overnight at 4°C, followed by a conjugated secondary and DAB staining



### Western Blotting

**Image 3.** Mouse brain lysates probed (ABIN744788) at 1:300 overnight in 4 °C. Followed by conjugation to the secondary antibody at 1:5000 90min in 37 °C.