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# anti-EIF2AK2 antibody (pThr446, pThr451)

3 Images



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	IV/E	۱//۱۲	$I \cap V$

0.0		
Quantity:	100 μL	
Target:	EIF2AK2	
Binding Specificity:	pThr446, pThr451	
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)), Flow Cytometry (FACS), Immunohistochemistry (Frozen Sections) (IHC (fro))	
Product Details		
Immunogen:	KLH conjugated synthetic phosphopeptide derived from human PKR around the phosphorylation site of Thr446/451	
Isotype:	IgG	
Cross-Reactivity:	Human, Mouse, Rat	
Purification:	Purified by Protein A.	
Target Details		
Target:	EIF2AK2	
Alternative Name:	PKR + (EIF2AK2 Products)	

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).

Gene ID: 5610

UniProt: P19525

Pathways: DNA Damage Repair, ER-Nucleus Signaling, Hepatitis C

**Application Details** 

Application Notes: WB 1:300-5000

ELISA 1:500-1000

FCM 1:20-100

IHC-P 1:200-400

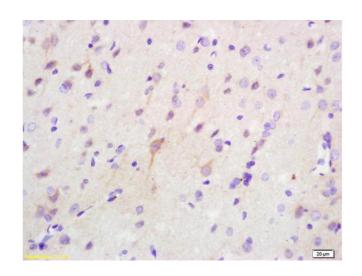
### **Application Details**

	IHC-F 1:100-500
	IF(IHC-P) 1:50-200
	IF(IHC-F) 1:50-200
	IF(ICC) 1:50-200
Restrictions:	For Research Use only

## Handling

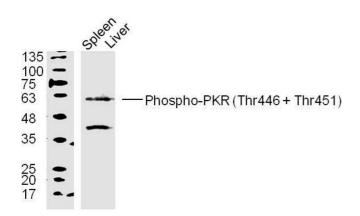
Format:	Liquid	
Concentration:	1 μg/μL	
Buffer:	0.01M TBS( pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.	
Preservative:	ProClin	
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.	
Storage:	4 °C,-20 °C	
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.	
Expiry Date:	12 months	

#### **Images**



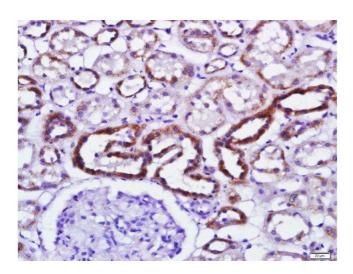
### **Immunohistochemistry**

**Image 1.** Formalin-fixed and paraffin embedded rat brain labeled with Anti Phospho-PKR (Thr446 + Thr451) Polyclonal Antibody (ABIN744818), Unconjugated at 1:200, followed by conjugation to the secondary antibody and DAB staining



#### **Western Blotting**

**Image 2.** Mouse spleen and liver lysates probed with PKR(Thr446+Thr451) Polyclonal Antibody, unconjugated at 1:300 overnight at 4°C followed by a conjugated secondary antibody at 1:10000 for 90 minutes at 37°C.



#### **Immunohistochemistry (Paraffin-embedded Sections)**

**Image 3.** 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+Thr451) Polyclonal Antibody, Unconjugated at 1:500 overnight at 4°C, followed by a conjugated secondary and DAB staining