

产品名称: Phospho-PKR (T446) (4N9) Rabbit Monoclonal Antibody
产品货号: AMRe05976



产品概述 (Summary)

产品名称 (Production Name)	Phospho-PKR (T446) (4N9) Rabbit Monoclonal Antibody
描述 (Description)	Recombinant rabbit monoclonal antibody
宿主 (Host)	Rabbit
应用 (Application)	WB,IP
种属反应性 (Reactivity)	Human

产品性能 (Performance)

偶联物 (Conjugation)	Unconjugated
修饰 (Modification)	Phosphorylated
同种型 (Isotype)	IgG
克隆 (Clonality)	Monoclonal
形式 (Form)	Liquid
存放说明 (Storage)	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
储存溶液 (Buffer)	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
纯化方式 (Purification)	Affinity purification

免疫原信息 (Immunogen)

基因名 (Gene Name)	EIF2AK2
别名 (Alternative Names)	E2AK2;E2AK2; EIF2AK1; EIF2AK2; MGC126524; PKR p68 kinase; PKR; PRKR;
基因 ID (Gene ID)	5610.0
蛋白 ID (SwissProt ID)	P19525.

产品应用 (Application)

稀释比 (Dilution Ratio)	WB 1:500-1:2000,IP 1:10-1:20
蛋白分子量 (Molecular Weight)	62kDa

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研究背景 (Background)

PKR a protein kinase of the PEK family. Upon binding double-stranded RNA, it becomes autophosphorylated and activated. Phosphorylates and inhibits the alpha subunit of eIF2 alpha, which leads to an inhibition of the initiation of protein synthesis. IFN-induced dsRNA-dependent serine/threonine-protein kinase that phosphorylates the alpha subunit of eukaryotic translation initiation factor 2 (EIF2S1/eIF-2-alpha) and plays a key role in the innate immune response to viral infection (PubMed: [18835251](http://www.uniprot.org/citations/18835251)), PubMed: [19507191](http://www.uniprot.org/citations/19507191), PubMed: [19189853](http://www.uniprot.org/citations/19189853), PubMed: [21123651](http://www.uniprot.org/citations/21123651), PubMed: [21072047](http://www.uniprot.org/citations/21072047), PubMed: [22948139](http://www.uniprot.org/citations/22948139), PubMed: [23229543](http://www.uniprot.org/citations/23229543), PubMed: [22381929](http://www.uniprot.org/citations/22381929)). Inhibits viral replication via the integrated stress response (ISR): EIF2S1/eIF-2- alpha phosphorylation in response to viral infection converts EIF2S1/eIF-2- alpha in a global protein synthesis inhibitor, resulting to a shutdown of cellular and viral protein synthesis, while concomitantly initiating the preferential translation of ISR-specific mRNAs, such as the transcriptional activator ATF4 (PubMed: [19189853](http://www.uniprot.org/citations/19189853), PubMed: [21123651](http://www.uniprot.org/citations/21123651), PubMed: [22948139](http://www.uniprot.org/citations/22948139), PubMed: [23229543](http://www.uniprot.org/citations/23229543)). 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) (PubMed: [11836380](http://www.uniprot.org/citations/11836380), PubMed: [19189853](http://www.uniprot.org/citations/19189853), PubMed: [20171114](http://www.uniprot.org/citations/20171114), PubMed: [19840259](http://www.uniprot.org/citations/19840259), PubMed: [21710204](http://www.uniprot.org/citations/21710204), PubMed: [23115276](http://www.uniprot.org/citations/23115276), PubMed: [23399035](http://www.uniprot.org/citations/23399035)). Also involved in the regulation of signal transduction, apoptosis, cell proliferation and differentiation: phosphorylates other substrates including p53/TP53, PPP2R5A, DHX9, ILF3, IRS1 and the HHV-1 viral protein US11 (PubMed: [11836380](http://www.uniprot.org/citations/11836380), PubMed: [22214662](http://www.uniprot.org/citations/22214662), PubMed: [19229320](http://www.uniprot.org/citations/19229320)). 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 (PubMed: [20395957](http://www.uniprot.org/citations/20395957)

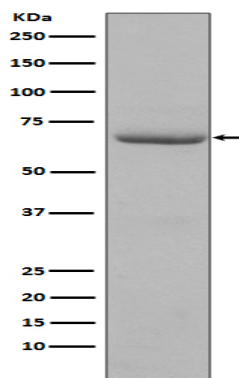
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target="_blank">20395957). Either as an adapter protein and/or via its kinase activity, can regulate various signaling pathways (p38 MAP kinase, NF-kappa-B and insulin signaling pathways) and transcription factors (JUN, STAT1, STAT3, IRF1, ATF3) involved in the expression of genes encoding proinflammatory cytokines and IFNs (PubMed:22948139, PubMed:23084476, PubMed:23372823). 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 (PubMed:10848580, PubMed:15121867, PubMed:15229216). Can act as both a positive and negative regulator of the insulin signaling pathway (ISP) (PubMed:20685959). 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) (PubMed:20685959). Can regulate NLRP3 inflammasome assembly and the activation of NLRP3, NLRP1, AIM2 and NLRC4 inflammasomes (PubMed:22801494). Plays a role in the regulation of the cytoskeleton by binding to gelsolin (GSN), sequestering the protein in an inactive conformation away from actin (By similarity).

研究领域 (Research Area)

Signal Transduction

图片 (Image Data)



Western blot analysis of PKR phosphorylation expression in HeLa cell lysate treated with Calyculin A and TNF-alpha.

注意事项 (Note)

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