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Product datasheet for AP02523PU-N

PKR (EIF2AK2) pThr446 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	Western Blot: 1/500-1/1000. Immunofluorescence: 1/100-1/200. Immunohistochemistry on Paraffin-Embedded Sections: 1/50-1/100.
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	The antiserum was produced against synthesized phosphopeptide derived from human PKR around the phosphorylation site of threonine 446 (K-R-T*P*-R-S).
Specificity:	This antibody detects endogenous levels of PKR only when phosphorylated at Threonine 446.
Formulation:	PBS (without Mg2+ and Ca2+), pH 7.4, 150 mM NaCl, 0.02% Sodium Azide and 50% Glycerol. State: Aff - Purified State: Liquid purified Ig fraction.
Concentration:	lot specific
Purification:	Affinity Chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatogramphy using non-phosphopeptide corresponding to the phosphorylation site.
Conjugation:	Unconjugated
Storage:	Store the antibody (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: One year from despatch.
Gene Name:	eukaryotic translation initiation factor 2 alpha kinase 2
Database Link:	Entrez Gene 5610 Human P19525

View online »

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 Alzheimer's disease. Alzheimer cases show prominent PKR activation in association with neuritic plaques and pyramidal neurons in the hippocampus and neocortex.

Synonyms: eIF-2A protein kinase 2, PRKR

Product images:

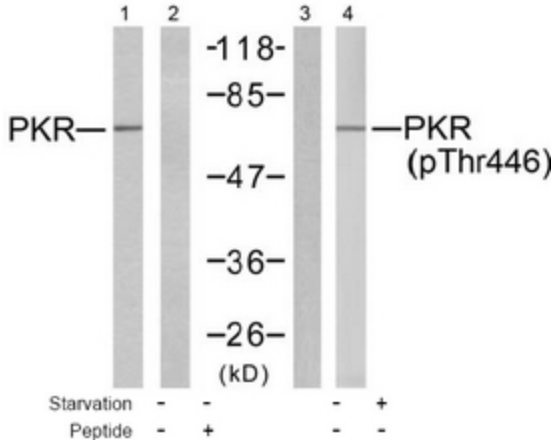

Figure 2. Western blot analysis of extracts from K562 cells, using PKR antibody (Lane 1 and 2) and PKR pThr446 antibody (Lane 3 and 4).

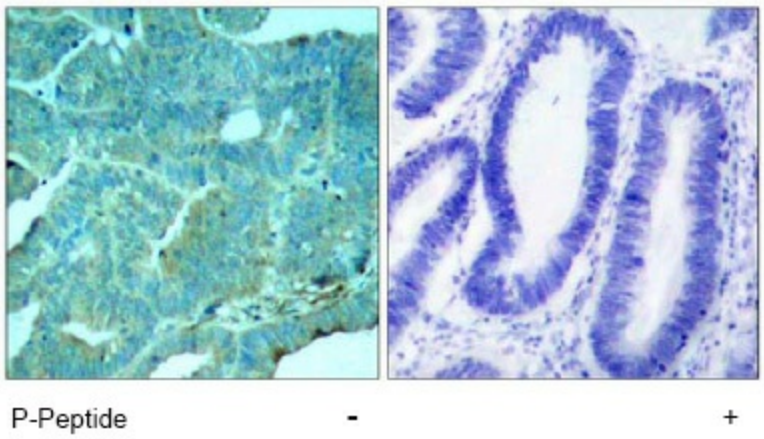

Figure 1. Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue, using PKR pThr446 antibody

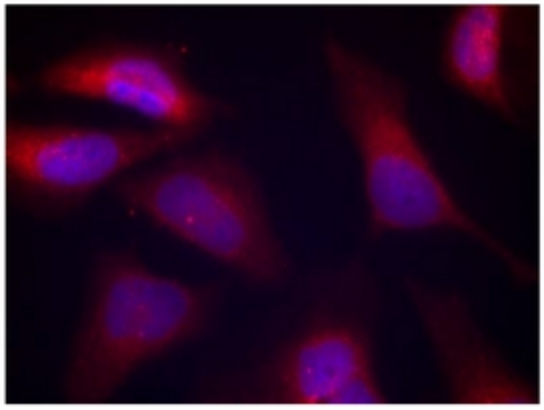

Figure 3. Immunofluorescence staining of methanol-fixed HeLa cells using PKR pThr446 antibody (Red).