

## Product datasheet for **AP02528PU-N**

### PKR (EIF2AK2) pThr451 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC
Recommended Dilution:	Immunohistochemistry: 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 451 (K-G-TP-L-R).
Specificity:	PKR antibody detects endogenous levels of PKR only when phosphorylated at threonine 451.
Formulation:	PBS(without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4 containing 150mM NaCl, 0.02% sodium azide and 50% glycerol State: Aff - Purified State: Liquid purified IgG
Concentration:	lot specific
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Conjugation:	Unconjugated
Storage:	Store the antibody 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:	<a href="#">Entrez Gene 5610 Human P19525</a>



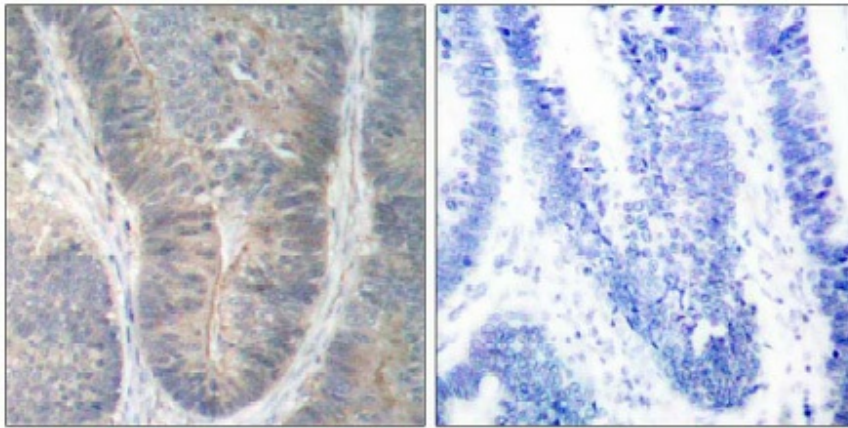
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**Background:**

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 NF $\kappa$ B, 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:**

Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue using PKR antibody.