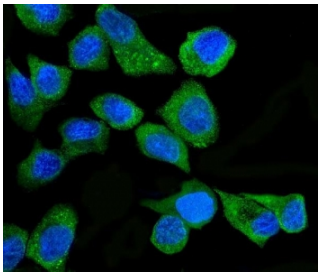
PKR Antibody / EIF2AK2 (R31995)

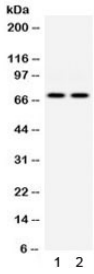
Catalog No.	Formulation	Size
R31995	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P19525
Localization	Cytoplasmic
Applications	Western Blot : 0.1-0.5ug/ml Immunofluorescence : 2-4ug/ml
Limitations	This PKR antibody is available for research use only.



Immunofluorescent staining of FFPE human A431 cells with PKR antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of 1) human HeLa and 2) human A549 cell lysate with PKR antibody. Predicted molecular weight ~62 kDa but routinely observed at 68-72 kDa.

Description

EIF2AK2 (Eukaryotic Translation Initiation Factor 2-Alpha Kinase 2), also called PKR, is an enzyme that in humans is encoded by the EIF2AK2 gene. Activation of EIF2AK2 allows the kinase to phosphorylate its natural substrate, the alpha subunit of eukaryotic protein synthesis initiation factor-2, leading to the inhibition of protein synthesis. By FISH analysis, Squire et al. (1993) assigned the EIF2AK2 gene to the boundary between chromosome 2p22-p21. Ben-Asouli et al. (2002) showed that human gamma-interferon mRNA uses local activation of PKR in the cell to control its own translation yield. IFNG mRNA was found to activate PKR through a pseudoknot in its 5-prime untranslated region. Taylor et al. (1999) studied the mechanism underlying the resistance of hepatitis C virus (HCV) to interferon. They demonstrated that the HCV envelope protein E2 contains a sequence identical with phosphorylation sites of the interferon-inducible protein kinase PKR and the translation initiation factor EIF2-alpha, a target of PKR. E2 inhibited the kinase activity of PKR and blocked its inhibitory effect on protein synthesis and cell growth.

Application Notes

Optimal dilution of the PKR antibody should be determined by the researcher.

Immunogen

Amino acids EKTLLQKLLSKKPEDRPNTSEILRTLTVWKKSPEKNERHTC of human PKR were used as the immunogen for the PKR antibody.

Storage

After reconstitution, the PKR antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.