

Interferon-Induced Double Stranded RNA-Activated Protein Kinase (EIF2AK2) Antibody

Catalogue No.:abx025142



Interferon-Induced Double Stranded RNA-Activated Protein Kinase (PRKR) is a serine-threonine kinase. Activation by dsRNAs leads to autophosphorylation of PRKR and allows the kinase to phosphorylate its natural substrate, the alpha subunit of eukaryotic protein synthesis initiation factor-2 (EIF2-alpha), leading to the inhibition of protein synthesis. Human gamma-interferon (IFNG) mRNA exploits localized activation of PRKR in the cell to regulate its own translation. IFNG mRNA activates PRKR through a pseudoknot in its 5-prime untranslated region. The HCV envelope protein E2 contains a sequence identical with phosphorylation sites of the interferon-inducible protein kinase PRKR and the translation initiation factor EIF2-alpha, a target of PRKR. E2 inhibits the kinase activity of PRKR and blocks its inhibitory effect on protein synthesis and cell growth, which provides one mechanism by which HCV may circumvent the antiviral effect of interferon. PRKR, which is involved in TLR signaling and mediates apoptosis in fibroblasts in response to viral infection and inflammatory cytokines, also activates IKK and NFKB, thereby suppressing apoptosis. Apoptosis induced by live pathogenic gram-positive and gram-negative bacteria requirs both TLR4 and PRKR, possibly representing a major mechanism for pathogenic bacteria that use specific virulence factors to avoid detection and destruction by the innate immune system. Roles for PRKR activation in Huntington disease and Fanconi anemia have also been suggested.

Target:	Interferon-Induced Double Stranded RNA-Activated Protein Kinase (EIF2AK2)
Research Area:	Enzymes and Kinases, Apoptosis, Infection Immunity

Datasheet Version: 2.0.0 Revision date: 21 Jun 2025



Clonality:	Polyclonal
Reactivity:	Human, Mouse
Tested Applications:	ELISA, WB, IHC
Host:	Rabbit
Recommended dilutions:	WB: 1/1000, IHC-P: 1/50 - 1/100. Not tested in IHC-F. Optimal dilutions/concentrations should be determined by the end user.
Conjugation:	Unconjugated
Immunogen:	KLH-conjugated synthetic peptide between 519-550 amino acids from the C-terminal region of Human EIF2AK2 (PRKR).
Isotype:	IgG
Form:	Liquid
Purification:	Purified Rabbit Polyclonal Antibody.
Storage:	Aliquot and store at -20°C. Avoid repeated freeze/thaw cycles.
UniProt Primary AC:	P19525 (<u>UniProt</u> , <u>ExPASy</u>)
KEGG:	hsa:5610
String:	<u>9606.ENSP00000233057</u>
Molecular Weight:	Calculated MW: 62.1 kDa
Buffer:	PBS containing 0.09% sodium azide.
Note:	THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC, THERAPEUTIC OR COSMETIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION.