

Immunotag™ Phospho-PKR (Thr446) Antibody

Antibody Specification	
Catalog No.	ITA0987
Product Description	Immunotag™ Phospho-PKR (Thr446) Antibody
Size	100 µg, 200 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	Phospho-PKR (Thr446)
Clonality	Polyclonal
Storage/Stability	-20°C/1 year
Application	WB,IF/ICC,ELISA
Recommended Dilution	WB 1:500-1:2000, IF/ICC 1:100-1:500
Concentration	1 mg/ml
Reactive Species	Human
Host Species	Rabbit
Immunogen	A synthesized peptide derived from human PKR around the phosphorylation site of Threonine 446
Specificity	Phospho-PKR (Thr446) Antibody detects endogenous levels of PKR only when phosphorylated at Threonine 446
Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt
Gene Name	EIF2AK2
Accession No.	P19525

Antibody Specification

Alternate Names	Double stranded RNA activated protein kinase;; E2AK2_HUMAN; eIF-2A protein kinase 2; EIF2AK1; EIF2AK2; Eukaryotic translation initiation factor 2 alpha kinase 2; Eukaryotic translation initiation factor 2-alpha kinase 2; HGNC:9437; Interferon induced double stranded RNA activated protein kinase; Interferon inducible eIF2 alpha kinase; Interferon inducible RNA dependent protein kinase; Interferon-induced, double-stranded RNA-activated protein kinase; Interferon-inducible RNA-dependent protein kinase; MGC126524; P1/eIF-2A protein kinase; P1/eIF2A protein kinase; p68 kinase; PKR; PPP1R83; PRKR; Protein kinase interferon inducible double stranded RNA dependent; Protein kinase RNA activated; Protein kinase RNA-activated; Protein phosphatase 1 regulatory subunit 83; Serine/threonine protein kinase TIK; Tyrosine protein kinase EIF2AK2;
Description	IFN-induced dsRNA-dependent serine/threonine-protein kinase which plays a key role in the innate immune response to viral infection and is also involved in the regulation of signal transduction, apoptosis, cell proliferation and differentiation. 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). Inhibits viral replication via phosphorylation of the alpha subunit of eukaryotic initiation factor 2 (EIF2S1), this phosphorylation impairs the recycling of EIF2S1 between successive rounds of initiation leading to inhibition of translation which eventually results in shutdown of cellular and viral protein synthesis. Also phosphorylates other substrates including p53/TP53, PPP2R5A, DHX9, ILF3, IRS1 and the HHV-1 viral protein US11. 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. 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. 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. Can act as both a positive and negative regulator of the insulin signaling pathway (ISP). 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). Can regulate NLRP3 inflammasome assembly and the activation of NLRP3, NLRP1, AIM2 and NLRC4 inflammasomes. Can trigger apoptosis via FADD-mediated activation of CASP8. Plays a role in the regulation of the cytoskeleton by binding to gelsolin (GSN), sequestering the protein in an inactive conformation away from actin.
Cell Pathway/ Category	Primary Polyclonal Antibody
Protein MW	74kDa
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.