Datasheet for ABIN5709451

E2AK2/PKR Protein (AA 2-551) (His-SUMO Tag)

1 Image

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Overview

Quantity:	100 µg
Target:	E2AK2/PKR (E2AK2)
Protein Characteristics:	AA 2-551
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This E2AK2/PKR protein is labelled with His-SUMO Tag.
Application:	SDS-PAGE (SDS)

Product Details

Sequence:	AGDLSAGFFM EELNTYRQKQ GVVLKYQELP NSGPPHDRRF TFQVIIDGRE FPEGEGRSKK EAKNAAAKLA VEILNKEKKA VSPLLLTTTN SSEGLSMGNY IGLINRIAQK KRLTVNYEQC ASGVHGPEGF HYKCKMGQKE YSIGTGSTKQ EAKQLAAKLA YLQILSEETS VKSDYLSSGS FATTCESQSN SLVTSTLASE SSSEGDFSAD TSEINSNSDS LNSSSLLMNG LRNNQRKAKR SLAPRFDLPD MKETKYTVDK RFGMDFKEIE LIGSGGFGQV FKAKHRIDGK TYVIKRVKYN NEKAEREVKA LAKLDHVNIV HYNGCWDGFD YDPETSDDSL ESSDYDPENS KNSSRSKTKC LFIQMEFCDK GTLEQWIEKR RGEKLDKVLA LELFEQITKG VDYIHSKKLI HRDLKPSNIF LVDTKQVKIG DFGLVTSLKN DGKRTRSKGT LRYMSPEQIS SQDYGKEVDL YALGLILAEL LHVCDTAFET SKFFTDLRDG IISDIFDKKE KTLLQKLLSK KPEDRPNTSE ILRTLTVWKK SPEKNERHTC
Purification:	SDS-PAGE
Purity:	> 90 %

Target Details

Target:	E2AK2/PKR (E2AK2)
Alternative Name:	E2AK2 (E2AK2 Products)
Background:	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 assbly 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
Molecular Weight:	77.92 kDa
UniProt:	P19525

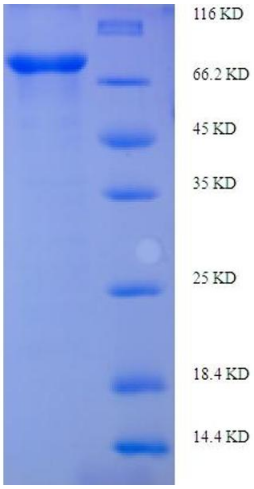
Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.1-2 mg/mL
Buffer:	20 mM Tris-HCl based buffer, pH 8.0
Storage:	-80 °C,4 °C,-20 °C
Storage Comment:	Store at -20°C, for extended storage, conserve at -20°C or -80°C. Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Images



SDS-PAGE

Image 1.