Datasheet for ABIN7565162

GCN2 Protein (AA 1-1648) (His tag)

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Overview

Quantity:	1 mg
Target:	GCN2 (EIF2AK4)
Protein Characteristics:	AA 1-1648
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This GCN2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Eif2ak4 Protein expressed in mammalien cells.
Sequence:	MAGGRGASGR GRAEPQESYS QRQDHELQAL EAIYGSDFQD LRPDARGRVR EPPEINLVLY PQGLAGEEVY VQVELQVKCP PTYPDVVPEI ELKNAKGLSN ESVNLLKSHL EELAKKQCGE VMIFELAHHV QSFLSEHNKP PPKSFHEEML ERQAQEKQQR LLEARRKEEQ EQREILHEIQ RRKEEIKEEK KRKEMAKQER LEITSLTNQD YASKRDPAGH RAAAILHGGS PDFVGNGKAR TYSSGRSRRE RQYSVCSGEP SPGSCDILHF SVGSPDQLMV HKGRCVGSDE QLGKVVYNAL ETATGSFVLL HEWVLQWQKM GPCLTSQEKE KIDKCKRQIQ GAETEFSSLV KLSHPNIVRY FAMNSREEED SIVIDILAEH VSGISLATHL SHSGPVPAHQ LRKYTAQLLA GLDYLHSNSV VHKVLSASSV LVDAEGTVKI TDYSISKRLA DICKEDVFEQ ARVRFSDSAL PYKTGKKGDV WRLGLLLLSL SQGQECGEYP VTIPSDLPAD FQDFLKKCVC LDDKERWSPQ QLLKHSFINP QPKLPLVEQS PEDSGGQDYI ETVIPSNQLP SAAFFSETQK QFSRYFIEFE ELQLLGKGAF GAVIKVQNKL DGCCYAVKRI PINPASRHFR RIKGEVTLLS RLHHENIVRY YNAWIERHER

	PAVPGTPPPD CTPQAQDSPA TCGKTSGDTE ELGSVEAAAP PPILSSSVEW STSAERSTST RFPVTGQDSS SDEEDEDERD GVFSQSFLPA SDSDSDIIFD NEDENSKSQN QDEDCNQKDG SHEIEPSVTA EAVHYLYIQM EYCEKSTLRD TIDQGLFRDT SRLWRLFREI LDGLAYIHEK GMIHRDLKPV NIFLDSDDHV KIGDFGLATD HLAFTAEGKQ DDQAGDGVIK SDPSGHLTGM VGTALYVSPE VQGSTKSAYN QKVDLFSLGI IFFEMSYHPM VTASERIFVL NQLRDPTSPK FPDDFDDGEH TKQKSVISWL LNHDPAKRPT AMELLKSELL PPPQMEESEL HEVLHHTLAN IDGKAYRTMM SQIFCQHISP AIDYTYDSDI LKGNFLIRTA KIQQLVCETI VRVFKRHGAV QLCTPLLLPR NRQIYEHNEA ALFMDHSGML VMLPFDLRVP FARYVARNNI LNLKRYCIER VFRPRKLDRF HPKELLECAF DIVTSTTNSS LPTAETIYTI YEIIQEFPAL QERNYSIYLN HTMLLKAILL HCGIPEDKLS QVYVILYDAV TEKLTRREVE AKFCNLSLSS NSLCRLYKFI EQKGDLQDLT PTINSLIKQK TGVAQLVKYS LKDLEDVVGL LKKLGVKLQV SINLGLVYKV QQHTGIIFQF LAFSKRRQRV VPEILAAGGR YDLLIPKFRG PQTVGPVPTA VGVSIAIDKI FAAVLNMEEP VTVSSCDLLV VSVGQMSMSR AINLTQKLWT AGITAEIMYD WSQSQEELQE YCRHHEITYV ALVSDKEGSH VKVKSFEKER QTEKRVLESD LVDHVMQKLR TKVGDERNFR DASDNLAVQT LKGSFSNASG LFEIHGTTVV PNVIVLAPEK LSASTRRRHE IQVQTRLQTT LANLHQKSSE IEILAVDLPK ETILQFLSLE WDADEQAFNT TVKQLLSRLP KQRYLKLVCD EIYNIKVEKK VSVLFLYSYR DDYYRILF **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot

Product Details

Grade:	custom-made

Target Details

Target:	GCN2 (EIF2AK4)
Alternative Name:	Eif2ak4 (EIF2AK4 Products)
Background:	EIF-2-alpha kinase GCN2 (Eukaryotic translation initiation factor 2-alpha kinase 4) (EC 2.7.11.1) (GCN2-like protein) (mGCN2),FUNCTION: Metabolic-stress sensing protein kinase that phosphorylates the alpha subunit of eukaryotic translation initiation factor 2 (EIF2S1/eIF-2-alpha) in response to low amino acid availability (PubMed:10504407, PubMed:10655230, PubMed:12176355, PubMed:12215525, PubMed:15213227, PubMed:16054071, PubMed:16176978, PubMed:16121183, PubMed:15774759, PubMed:16601681, PubMed:26102367). Plays a role as an activator of the integrated stress response (ISR) required for adaptation to amino acid starvation (PubMed:10655230, PubMed:11106749, PubMed:12176355, PubMed:15213227, PubMed:16176978, PubMed:26102367). EIF2S1/eIF-2-alpha phosphorylation in response to stress converts EIF2S1/eIF-2-alpha into a global protein synthesis inhibitor, leading to a global attenuation of cap-dependent translation, and thus to a reduced overall utilization of amino acids, while concomitantly initiating the preferential translation of ISR-specific mRNAs, such as the transcriptional activator ATF4, and hence allowing ATF4-mediated reprogramming of amino acid biosynthetic gene expression to alleviate nutrient depletion (PubMed:10655230, PubMed:11106749, PubMed:12176355, PubMed:15213227, PubMed:16176978, PubMed:26102367). Required for the translational induction of protein kinase PRKCH following amino acid starvation (PubMed:19797084). Binds uncharged tRNAs (By similarity). Involved in cell cycle arrest by promoting cyclin D1 mRNA translation repression after the unfolded protein response pathway (UPR) activation or cell cycle inhibitor CDKN1A/p21 mRNA translation activation in response to amino acid deprivation (PubMed:16176978, PubMed:26102367). Plays a role in the consolidation of synaptic plasticity, learning as well as formation of long-term memory (PubMed:16121183). Plays a role in neurite outgrowth inhibition (PubMed:23447528). Plays a role in feeding behavior to maintain amino acid homeostasis, contributes to the innate aversion toward diets of imbalanced amino acid composition (PubMed:16054071, PubMed:15774759). Plays a proapoptotic role in response to glucose deprivation (PubMed:20660158). Promotes global cellular protein synthesis repression in response to UV irradiation independently of the stress-activated protein kinase/c-Jun N-terminal kinase (SAPK/JNK) and p38 MAPK signaling pathways (PubMed:12176355). {ECO:0000250|UniProtKB:P15442, ECO:0000269|PubMed:10504407, ECO:0000269|PubMed:10655230, ECO:0000269|PubMed:11106749,

Target Details

	ECO:0000269|PubMed:12176355, ECO:0000269|PubMed:12215525, ECO:0000269|PubMed:15213227, ECO:0000269|PubMed:15774759, ECO:0000269|PubMed:16054071, ECO:0000269|PubMed:16121183, ECO:0000269|PubMed:16176978, ECO:0000269|PubMed:16601681, ECO:0000269|PubMed:19797084, ECO:0000269|PubMed:20660158, ECO:0000269|PubMed:23447528, ECO:0000269|PubMed:26102367}., FUNCTION: (Microbial infection) Plays a role in the antiviral response against alphavirus infection, impairs early viral mRNA translation of the incoming genomic virus RNA, thus preventing alphavirus replication. {ECO:0000269|PubMed:16601681}., FUNCTION: (Microbial infection) Plays a role in modulating the adaptive immune response to Yellow fever virus infection, promotes dendritic cells to initiate autophagy and antigene presentation to both CD4(+) and CD8(+) T-cells under amino acid starvation. {ECO:0000269|PubMed:24310610}.
Molecular Weight:	186.5 kDa
UniProt:	Q9QZ05
Pathways:	ER-Nucleus Signaling, Hepatitis C

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months