Datasheet for ABIN3137640

EIF2AK1 Protein (AA 1-619) (His tag)

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1 Image

Overview

Quantity:	1 mg
Target:	EIF2AK1
Protein Characteristics:	AA 1-619
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This EIF2AK1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MLGGSSVDGE RDTDDDAAGA VAAPPAIDFP AEVSDPKYDE SDVPAELQVL KEPLQQPTFP FLVANQLLLV SLLEHLSHVH EPNPLHSKQV FKLLCQTFIK MGLLSSFTCS DEFSSLRLHH NRAITHLMRS AKERVRQDPC QDNSYMQKIR SREIAFEAQT SRYLNEFEEL AILGKGGYGR VYKVRNKLDG QHYAIKKILI KSATKTDCMK VLREVKVLAG LQHPNIVGYH TAWIEHVHVV QPQDRVPIQL PSLEVLSEQE GDRDQGGVKD NESSSSIVFA ELTPEKEKPF GESEVKNENN NLVSYTANLV VRNSSESESS IELQEDGLTD LSVRPVVRHQ LPLGHSSELE GNFTSTDESS EGNLNLLGQT EVRYHLMLHI QMQLCELSLW DWITERNKRS REYVDEAACP YVMASVATKI FQELVEGVFY IHNMGIVHRD LKPRNIFLHG PDQQVKIGDF GLACADIIQN ADWTNRNGKG TRTHTSRVGT CLYASPEQLE GSQYDAKSDM YSLGVILLEL FQPFGTEMER ATVLTGVRTG RIPESLSKRC PVQAKYIQLL TGRNVSQRPS ALQLLQSELF QTTGNVNLTL QMKIIEQEKE IEELKKQLSL LSQDRGLKR **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a**

	special request, please contact us.
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse Eif2ak1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade. • 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 will ensure that you receive a correctly folded protein. 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	EIF2AK1
Alternative Name:	Eif2ak1 (EIF2AK1 Products)
Background:	Inhibits protein synthesis at the translation initiation level, in response to various stress conditions, including oxidative stress, heme deficiency, osmotic shock and heat shock. Exerts its function through the phosphorylation of EIF2S1 at 'Ser-48' and 'Ser-51', thus preventing its recycling. Binds hemin forming a 1:1 complex through a cysteine thiolate and histidine nitrogenous coordination. This binding occurs with moderate affinity, allowing it to sense the heme concentration within the cell. Thanks to this unique heme-sensing capacity, plays a crucial role to shut off protein synthesis during acute heme-deficient conditions. In red blood cells (RBCs), controls hemoglobin synthesis ensuring a coordinated regulation of the synthesis of its heme and globin moieties. Thus plays an essential protective role for RBC survival in anemias of iron deficiency. Similarly, in hepatocytes, involved in heme-mediated translational control of CYP2B and CYP3A and possibly other hepatic P450 cytochromes. May also contain ER stress during acute heme-deficient conditions. {ECO:0000269|PubMed:11726526, ECO:0000269|PubMed:16893190, ECO:0000269|PubMed:20071449}.
Molecular Weight:	70.7 kDa Including tag.
UniProt:	Q9Z2R9
Pathways:	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 gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

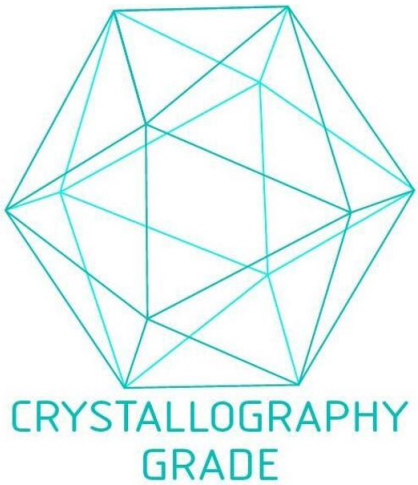

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process