Datasheet for ABIN3092963

HIPK2 Protein (AA 1-1198) (Strep Tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	HIPK2
Protein Characteristics:	AA 1-1198
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HIPK2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MAPVYEGMAS HVQVFSPHTL QSSAFCSVKK LKIEPSSNWD MTGYGSHSKV YSQSKNIPLS QPATTTVSTS LPVPNPSLPY EQTIVFPGST GHIVVTSASS TSVTGQVLGG PHNLMRRSTV SLLDTYQKCG LKRKSEEIEN TSSVQIIEEH PPMIQNNASG ATVATATTST ATSKNSGSNS EGDYQLVQHE VLCSMTNTYE VLEFLGRGTF GQVVKCWKRG TNEIVAIKIL KNHPSYARQG QIEVSILARL STESADDYNF VRAYECFQHK NHTCLVFEML EQNLYDFLKQ NKFSPLPLKY IRPVLQQVAT ALMKLKSLGL IHADLKPENI MLVDPSRQPY RVKVIDFGSA SHVSKAVCST YLQSRYYRAP EIILGLPFCE AIDMWSLGCV IAELFLGWPL YPGASEYDQI RYISQTQGLP AEYLLSAGTK TTRFFNRDTD SPYPLWRLKT PDDHEAETGI KSKEARKYIF NCLDDMAQVN MTTDLEGSDM LVEKADRREF IDLLKKMLTI DADKRITPIE TLNHPFVTMT HLLDFPHSTH VKSCFQNMEI CKRRVNMYDT VNQSKTPFIT HVAPSTSTNL TMTFNNQLTT VHNQAPSSTS ATISLANPEV SILNYPSTLY QPSAASMAAV AQRSMPLQTG TAQICARPDP FQQALIVCPP GFQGLQASPS KHAGYSVRME NAVPIVTQAP GAQPLQIQPG LLAQQAWPSG TQQILLPPAW

QQLTGVATHT SVQHATVIPE TMAGTQQLAD WRNTHAHGSH YNPIMQQPAL LTGHVTLPAA QPLNVGVAHV MRQQPTSTTS SRKSKQHQSS VRNVSTCEVS SSQAISSPQR SKRVKENTPP RCAMVHSSPA CSTSVTCGWG DVASSTTRER QRQTIVIPDT PSPTVSVITI SSDTDEEEEQ KHAPTSTVSK QRKNVISCVT VHDSPYSDSS SNTSPYSVQQ RAGHNNANAF DTKGSLENHC TGNPRTIIVP PLKTQASEVL VECDSLVPVN TSHHSSSYKS KSSSNVTSTS GHSSGSSSGA ITYRQQRPGP HFQQQQPLNL SQAQQHITTD RTGSHRRQQA YITPTMAQAP YSFPHNSPSH GTVHPHLAAA AAAAHLPTQP HLYTYTAPAA LGSTGTVAHL VASQGSARHT VQHTAYPASI VHQVPVSMGP RVLPSPTIHP SQYPAQFAHQ TYISASPAST VYTGYPLSPA KVNQYPYI

Sequence without tag. The proposed Strep-Tag is based on experience s 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 in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Product Details

	Concentration: • 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. • We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	HIPK2
Alternative Name:	HIPK2 (HIPK2 Products)
Background:	Homeodomain-interacting protein kinase 2 (hHIPk2) (EC 2.7.11.1),FUNCTION: Serine/threonine-protein kinase involved in transcription regulation, p53/TP53-mediated cellular apoptosis and regulation of the cell cycle. Acts as a corepressor of several transcription factors, including SMAD1 and POU4F1/Brn3a and probably NK homeodomain transcription factors. Phosphorylates PDX1, ATF1, PML, p53/TP53, CREB1, CTBP1, CBX4, RUNX1, EP300, CTNNB1, HMGA1, ZBTB4 and DAZAP2. Inhibits cell growth and promotes apoptosis through the activation of p53/TP53 both at the transcription level and at the protein level (by phosphorylation and indirect acetylation). The phosphorylation of p53/TP53 may be mediated by a p53/TP53-HIPK2-AXIN1 complex. Involved in the response to hypoxia by acting as a transcriptional co-suppressor of HIF1A. Mediates transcriptional activation of TP73. In response to TGFB, cooperates with DAXX to activate JNK. Negative regulator through phosphorylation and subsequent proteasomal degradation of CTNNB1 and the antiapoptotic factor CTBP1. In the Wnt/beta-catenin signaling pathway acts as an intermediate kinase between MAP3K7/TAK1 and NLK to promote the proteasomal degradation of MYB.

Target Details

	Phosphorylates CBX4 upon DNA damage and promotes its E3 SUMO-protein ligase activity. Activates CREB1 and ATF1 transcription factors by phosphorylation in response to genotoxic stress. In response to DNA damage, stabilizes PML by phosphorylation. PML, HIPK2 and FBXO3 may act synergically to activate p53/TP53-dependent transactivation. Promotes angiogenesis, and is involved in erythroid differentiation, especially during fetal liver erythropoiesis. Phosphorylation of RUNX1 and EP300 stimulates EP300 transcription regulation activity. Triggers ZBTB4 protein degradation in response to DNA damage. In response to DNA damage, phosphorylates DAZAP2 which localizes DAZAP2 to the nucleus, reduces interaction of DAZAP2 with HIPK2 and prevents DAZAP2-dependent ubiquitination of HIPK2 by E3 ubiquitin-protein ligase SIAH1 and subsequent proteasomal degradation (PubMed:33591310). Modulates HMGA1 DNA-binding affinity. In response to high glucose, triggers phosphorylation-mediated subnuclear localization shifting of PDX1. Involved in the regulation of eye size, lens formation and retinal lamination during late embryogenesis. {ECO:0000269|PubMed:11740489, ECO:0000269|PubMed:11925430, ECO:0000269|PubMed:12851404, ECO:0000269|PubMed:12874272, ECO:0000269|PubMed:14678985, ECO:0000269|PubMed:17018294, ECO:0000269|PubMed:17960875, ECO:0000269|PubMed:18695000, ECO:0000269|PubMed:18809579, ECO:0000269|PubMed:19015637, ECO:0000269|PubMed:19046997, ECO:0000269|PubMed:19448668, ECO:0000269|PubMed:20307497, ECO:0000269|PubMed:20573984, ECO:0000269|PubMed:20637728, ECO:0000269|PubMed:20980392, ECO:0000269|PubMed:21192925, ECO:0000269|PubMed:22825850, ECO:0000269|PubMed:33591310}.
Molecular Weight:	131.0 kDa
UniProt:	Q9H2X6
Pathways:	Cell Division Cycle

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.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

Application Details

	During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

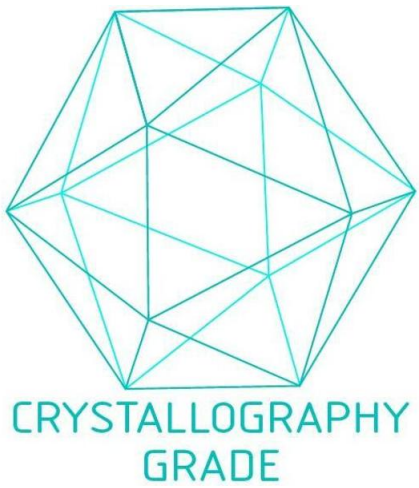

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process