Datasheet for ABIN3136846

SH2B1 Protein (AA 1-756) (Strep Tag)

Go to Product page

Overview

Quantity:	250 µg
Target:	SH2B1
Protein Characteristics:	AA 1-756
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SH2B1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MNGAPSPEDG VFPSPPALPP PPPPSWQEFC ESHARAAALD LARRFRLYLA SHPQYAEPGA EAAFSGRFAE LFLQHFEAEV ARASGSLSPP VLAPLSPGVE IPPSHDLSLE SCRVGGPLAV LGPSRSSEDL AGPLPSSVPS STTSSKPKLK KRFSLRSVGR SVRGSVRGIL QWRGAVDSPS QAGPLETTSG PPVLGGNSNS NSSGGAGTVG RALANDGTSP GERWTHRFER LRLSRGGGTL KDGAGMIQRE ELLSFMGAEE AAPDPAGVGR GGGAAGLTSG GGGQPQWQKC RLLLRSEGEG GGGSRLEFFV PPKASRPRLS IPCSTITDVR TATALEMPDR ENTFVVKVEG PSEYILETSD ALHVKAWVSD IQECLSPGPC PAISPRPMTL PLAPGTSFFT KDNTDSLELP CLNHSESLPS QDLLLGPSES NDRLSQGAYG GLSDRPSASF SPSSASIAAS HFDSMELLPP ELPPRIPIEE GPPAGTVHPL STPYPPLDTP EAATGSFLFQ GESEGGEGDQ PLSGYPWFHG MLSRLKAAQL VLEGGTGSHG VFLVRQSETR RGEYVLTFNF QGKAKHLRLS LNEEGQCRVQ HLWFQSIFDM LEHFRVHPIP LESGGSSDVV LVSYVPSQRQ QERSTSRDPA QPSEPPPWTD PPHPGAEEAS

GAPEVAAATA AAAKERQEKE KAGSGGVQEE LVPVAELVPM VELEEAIAPG TEAQGGAGSS GDLEVSLMVQ LQQLPLGGNG EEGGHPRAIN NQYSFV

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 in one-step affinity chromatography
- 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 try to ensure that you receive soluble 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!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).

Product Details

Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	SH2B1
Alternative Name:	Sh2b1 (SH2B1 Products)
Background:	SH2B adapter protein 1 (Pro-rich, PH and SH2 domain-containing signaling mediator) (PSM) (SH2 domain-containing protein 1B) (SH2-B PH domain-containing signaling mediator 1),FUNCTION: Adapter protein for several members of the tyrosine kinase receptor family. Involved in multiple signaling pathways mediated by Janus kinase (JAK) and receptor tyrosine kinases, including the receptors of insulin (INS), insulin-like growth factor I (IGF1), nerve growth factor (NGF), brain-derived neurotrophic factor (BDNF), glial cell line-derived neurotrophic factor (GDNF), platelet-derived growth factor (PDGF) and fibroblast growth factors (FGFs). In growth hormone (GH) signaling, autophosphorylated ('Tyr-813') JAK2 recruits SH2B1, which in turn is phosphorylated by JAK2 on tyrosine residues. These phosphotyrosines form potential binding sites for other signaling proteins. GH also promotes serine/threonine phosphorylation of SH2B1 and these phosphorylated residues may serve to recruit other proteins to the GHR-JAK2-SH2B1 complexes, such as RAC1. In leptin (LEP) signaling, binds to and potentiates the activation of JAK2 by globally enhancing downstream pathways. In response to leptin, binds simultaneously to both, JAK2 and IRS1 or IRS2, thus mediating formation of a complex of JAK2, SH2B1 and IRS1 or IRS2. Mediates tyrosine phosphorylation of IRS1 and IRS2, resulting in activation of the PI 3-kinase pathway. Acts as a positive regulator of NGF-mediated activation of the Akt/Forkhead pathway, prolongs NGF-induced phosphorylation of AKT1 on 'Ser-473' and AKT1 enzymatic activity. Enhances the kinase activity of the cytokine receptor-associated tyrosine kinase JAK2 and of other receptor tyrosine kinases, such as FGFR3 and NTRK1. For JAK2, the mechanism seems to involve dimerization of both, SH2B1 and JAK2. Enhances RET phosphorylation and kinase activity (By similarity). Isoforms seem to be differentially involved in IGF-I and PDGF-induced mitogenesis, according the order: isoform 3 > isoform 4 > isoform 1 > isoform 2. {ECO:0000250, ECO:0000269|PubMed:11502739, ECO:0000269|PubMed:15316008, ECO:0000269|PubMed:16098827, ECO:0000269|PubMed:9343427}.
Molecular Weight:	79.6 kDa
UniProt:	Q91ZM2

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. 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. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months