Datasheet for ABIN3092969

HSPA2 Protein (AA 1-639) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	HSPA2
Protein Characteristics:	AA 1-639
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HSPA2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MSARGPAIGI DLGTTYSCVG VFQHGKVEII ANDQGNRTTP SYVAFTDTER LIGDAAKNQV AMNPTNTIFD AKRLIGRKFE DATVQSDMKH WPFRVVSEGG KPKVQVEYKG ETKTFFPEEI SSMVLTKMKE IAEAYLGGKV HSAVITVPAY FNDSQRQATK DAGTITGLNV LRIINEPTAA AIAYGLDKKG CAGGEKNVLI FDLGGGTFDV SILTIEDGIF EVKSTAGDTH LGGEDFDNRM VSHLAEEFKR KHKKDIGPNK RAVRRLRTAC ERAKRTLSSS TQASIEIDSL YEGVDFYTSI TRARFEELNA DLFRGTLEPV EKALRDAKLD KGQIQEIVLV GGSTRIPKIQ KLLQDFFNGK ELNKSINPDE AVAYGAAVQA AILIGDKSEN VQDLLLLDVT PLSLGIETAG GVMTPLIKRN TTIPTKQTQT FTTYSDNQSS VLVQVYEGER AMTKDNNLLG KFDLTGIPPA PRGVPQIEVT FDIDANGILN VTAADKSTGK ENKITITNDK GRLSKDDIDR MVQEAERYKS EDEANRDRVA AKNALESYTY NIKQTVEDEK LRGKISEQDK NKILDKCQEV INWLDRNQMA EKDEYEHKQK ELERVCNPII SKLYQGGPGG GSGGGGSGAS GGPTIEEVD **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!

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

Product Details

	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)

Target Details

Target:	HSPA2
Alternative Name:	HSPA2 (HSPA2 Products)
Background:	Heat shock-related 70 kDa protein 2 (Heat shock 70 kDa protein 2),FUNCTION: Molecular chaperone implicated in a wide variety of cellular processes, including protection of the proteome from stress, folding and transport of newly synthesized polypeptides, activation of proteolysis of misfolded proteins and the formation and dissociation of protein complexes. Plays a pivotal role in the protein quality control system, ensuring the correct folding of proteins, the re-folding of misfolded proteins and controlling the targeting of proteins for subsequent degradation. This is achieved through cycles of ATP binding, ATP hydrolysis and ADP release, mediated by co-chaperones. The affinity for polypeptides is regulated by its nucleotide bound state. In the ATP-bound form, it has a low affinity for substrate proteins. However, upon hydrolysis of the ATP to ADP, it undergoes a conformational change that increases its affinity for substrate proteins. It goes through repeated cycles of ATP hydrolysis and nucleotide exchange, which permits cycles of substrate binding and release (PubMed:26865365). Plays a role in spermatogenesis. In association with SHCBP1L may participate in the maintenance of spindle integrity during meiosis in male germ cells (By similarity). {ECO:0000250|UniProtKB:P17156, ECO:0000303|PubMed:26865365}.
Molecular Weight:	70.0 kDa
UniProt:	P54652

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

Application Details

	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. 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)

