Datasheet for ABIN3092532

BTRC Protein (AA 1-605) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	BTRC
Protein Characteristics:	AA 1-605
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This BTRC protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MDPAEAVLQE KALKFMCSMP RSLWLGCSSL ADSMPSLRCL YNPGTGALTA FQNSSEREDC NNGEPPRKII PEKNSLRQTY NSCARLCLNQ ETVCLASTAM KTENCVAKTK LANGTSSMIV PKQRKLSASY EKEKELCVKY FEQWSESDQV EFVEHLISQM CHYQHGHINS YLKPMLQRDF ITALPARGLD HIAENILSYL DAKSLCAAEL VCKEWYRVTS DGMLWKKLIE RMVRTDSLWR GLAERRGWGQ YLFKNKPPDG NAPPNSFYRA LYPKIIQDIE TIESNWRCGR HSLQRIHCRS ETSKGVYCLQ YDDQKIVSGL RDNTIKIWDK NTLECKRILT GHTGSVLCLQ YDERVIITGS SDSTVRVWDV NTGEMLNTLI HHCEAVLHLR FNNGMMVTCS KDRSIAVWDM ASPTDITLRR VLVGHRAAVN VVDFDDKYIV SASGDRTIKV WNTSTCEFVR TLNGHKRGIA CLQYRDRLVV SGSSDNTIRL WDIECGACLR VLEGHEELVR CIRFDNKRIV SGAYDGKIKV WDLVAALDPR APAGTLCLRT LVEHSGRVFR LQFDEFQIVS SSHDDTILIW DFLNDPAAQA EPPRSPSRTY TYISR **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 capture material. Eluate fractions are analyzed by SDS-PAGE.

Product Details

	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:	BTRC
Alternative Name:	BTRC (BTRC Products)
Background:	F-box/WD repeat-containing protein 1A (E3RSIkappaB) (Epididymis tissue protein Li 2a) (F-box and WD repeats protein beta-TrCP) (pIkappaBalpha-E3 receptor subunit),FUNCTION: Substrate recognition component of a SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:10066435, PubMed:10497169, PubMed:9990852, PubMed:10644755, PubMed:10835356, PubMed:11238952, PubMed:11359933, PubMed:11158290, PubMed:11994270, PubMed:12791267, PubMed:12902344, PubMed:14603323, PubMed:14681206, PubMed:14988407, PubMed:15448698, PubMed:15917222, PubMed:16371461, PubMed:25503564, PubMed:25704143, PubMed:9859996, PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:22087322, PubMed:36608670). Recognizes and binds to phosphorylated target proteins (PubMed:10066435, PubMed:10497169, PubMed:9990852, PubMed:10644755, PubMed:10835356, PubMed:11238952, PubMed:11359933, PubMed:11158290, PubMed:11994270, PubMed:12791267, PubMed:12902344, PubMed:14603323, PubMed:14681206, PubMed:14988407, PubMed:15448698, PubMed:15917222, PubMed:16371461, PubMed:25503564, PubMed:25704143, PubMed:9859996, PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:22087322, PubMed:36608670). SCF(BTRC) mediates the ubiquitination of CTNNB1 and participates in Wnt signaling (PubMed:12077367, PubMed:12820959). SCF(BTRC) mediates the ubiquitination of phosphorylated NFKB1, ATF4, CDC25A, DLG1, FBXO5, PER1, SMAD3, SMAD4, SNAI1 and probably NFKB2 (PubMed:10835356, PubMed:11238952, PubMed:14681206, PubMed:14603323). SCF(BTRC) mediates the ubiquitination of NFKBIA, NFKBIB and NFKBIE, the degradation frees the associated NFKB1 to translocate into the nucleus and to activate transcription (PubMed:9859996, PubMed:10066435, PubMed:10497169, PubMed:10644755).

	Ubiquitination of NFKBIA occurs at 'Lys-21' and 'Lys-22' (PubMed:10066435). The SCF(FBXW11) complex also regulates NF-kappa-B by mediating ubiquitination of phosphorylated NFKB1: specifically ubiquitinates the p105 form of NFKB1, leading to its degradation (PubMed:10835356, PubMed:11158290, PubMed:14673179). SCF(BTRC) mediates the ubiquitination of CEP68, this is required for centriole separation during mitosis (PubMed:25704143, PubMed:25503564). SCF(BTRC) mediates the ubiquitination and subsequent degradation of nuclear NFE2L1 (By similarity). Has an essential role in the control of the clock-dependent transcription via degradation of phosphorylated PER1 and PER2 (PubMed:15917222). May be involved in ubiquitination and subsequent proteasomal degradation through a DBB1-CUL4 E3 ubiquitin-protein ligase. Required for activation of NFKB-mediated transcription by IL1B, MAP3K14, MAP3K1, IKBKB and TNF. Required for proteolytic processing of GLI3 (PubMed:16371461). Mediates ubiquitination of REST, thereby leading to its proteasomal degradation (PubMed:21258371, PubMed:18354482). SCF(BTRC) mediates the ubiquitination and subsequent proteasomal degradation of KLF4, thereby negatively regulating cell pluripotency maintenance and embryogenesis (By similarity). SCF(BTRC) acts as a regulator of mTORC1 signaling pathway by catalyzing ubiquitination and subsequent proteasomal degradation of phosphorylated DEPTOR, TFE3 and MITF (PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:33110214, PubMed:36608670). {ECO:0000250|UniProtKB:Q3ULA2, ECO:0000269|PubMed:10066435, ECO:0000269|PubMed:10497169, ECO:0000269|PubMed:10644755, ECO:0000269|PubMed:10835356, ECO:0000269|PubMed:11158290, ECO:0000269|PubMed:11238952, ECO:0000269|PubMed:11359933, ECO:0000269|PubMed:11994270, ECO:0000269|PubMed:12077367, ECO:0000269|PubMed:12791267, ECO:0000269|PubMed:12820959, ECO:0000269|PubMed:12902344, ECO:0000269|PubMed:14603323, ECO:0000269|PubMed:14673179, ECO:0000269|PubMed:14681206, ECO:0000269|PubMed:14988407, ECO:0000269|PubMed:15448698, ECO:0000269|PubMed:15917222, ECO:0000269|PubMed:16371461, ECO:0000269|PubMed:18354482, ECO:0000269|PubMed:21258371, ECO:0000269|PubMed:22017875, ECO:0000269|PubMed:22017876, ECO:0000269|PubMed:22017877, ECO:0000269|PubMed:22087322, ECO:0000269|PubMed:25503564, ECO:0000269|PubMed:25704143, ECO:0000269|PubMed:33110214, ECO:0000269|PubMed:9859996, ECO:0000269|PubMed:9990852}.
Molecular Weight:	68.9 kDa

Target Details

UniProt:	Q9Y297
Pathways:	Cell Division Cycle, Hedgehog Signaling

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. 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)

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

