Datasheet for ABIN3090387

CIITA Protein (AA 1-1130) (Strep Tag)

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1 Image

Overview

Quantity:	1 mg
Target:	CIITA
Protein Characteristics:	AA 1-1130
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CIITA protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MRCLAPRPAG SYLSEPQGSS QCATMELGPL EGGYLELLNS DADPLCLYHF YDQMDLAGEE EIELYSEPDT DTINCDQFSR LLCDMEGDEE TREAYANIAE LDQYVFQDSQ LEGLSKDIFK HIGPDEVIGE SMEMPAEVGQ KSQKRPFPEE LPADLKHWKP AEPPTVVTGS LLVRPVSDCS TLPCLPLPAL FNQEPASGQM RLEKTDQIPM PFSSSSLSCL NLPEGPIQFV PTISTLPHGL WQISEAGTGV SSIFIYHGEV PQASQVPPPS GFTVHGLPTS PDRPGSTSPF APSATDLPSM PEPALTSRAN MTEHKTSPTQ CPAAGEVSNK LPKWPEPVEQ FYRSLQDTYG AEPAGPDGIL VEVDLVQARL ERSSSKSLER ELATPDWAER QLAQGGLAEV LLAAKEHRRP RETRVIAVLG KAGQGKSYWA GAVSRAWACG RLPQYDFVFS VPCHCLNRPG DAYGLQDLLF SLGPQPLVAA DEVFSHILKR PDRVLLILDG FEELEAQDGF LHSTCGPAPA EPCSLRGLLA GLFQKKLLRG CTLLLTARPR GRLVQSLSKA DALFELSGFS MEQAQAYVMR YFESSGMTEH QDRALTLLRD RPLLLSHSHS PTLCRAVCQL SEALLELGED AKLPSTLTGL YVGLLGRAAL DSPPGALAEL AKLAWELGRR HQSTLQEDQF PSADVRTWAM AKGLVQHPPR AAESELAFPS FLLQCFLGAL

WLALSGEIKD KELPQYLALT PRKKRPYDNW LEGVPRFLAG LIFQPPARCL GALLGPSAAA SVDRKQKVLA RYLKRLQPGT LRARQLLELL HCAHEAEEAG IWQHVVQELP GRLSFLGTRL TPPDAHVLGK ALEAAGQDFS LDLRSTGICP SGLGSLVGLS CVTRFRAALS DTVALWESLQ QHGETKLLQA AEEKFTIEPF KAKSLKDVED LGKLVQTQRT RSSSEDTAGE LPAVRDLKKL EFALGPVSGP QAFPKLVRIL TAFSSLQHLD LDALSENKIG DEGVSQLSAT FPQLKSLETL NLSQNNITDL GAYKLAEALP SLAASLLRLS LYNNCICDVG AESLARVLPD MVSLRVMDVQ YNKFTAAGAQ QLAASLRRCP HVETLAMWTP TIPFSVQEHL QQQDSRISLR

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:

Product Details

- 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:	CIITA
Alternative Name:	CIITA (CIITA Products)
Background:	MHC class II transactivator (CIITA) (EC 2.3.1.-) (EC 2.7.11.1),FUNCTION: Essential for transcriptional activity of the HLA class II promoter, activation is via the proximal promoter (PubMed:8402893, PubMed:7749984, PubMed:17493635, PubMed:16600381). Does not bind DNA (PubMed:8402893, PubMed:7749984, PubMed:17493635, PubMed:16600381). May act in a coactivator-like fashion through protein-protein interactions by contacting factors binding to the proximal MHC class II promoter, to elements of the transcription machinery, or both PubMed:8402893, PubMed:7749984, (PubMed:17493635, PubMed:16600381). Alternatively it may activate HLA class II transcription by modifying proteins that bind to the MHC class II promoter (PubMed:8402893, PubMed:7749984, PubMed:17493635, PubMed:16600381). Also mediates enhanced MHC class I transcription, the promoter element requirements for CIITA-mediated transcription are distinct from those of constitutive MHC class I transcription, and CIITA can functionally replace TAF1 at these genes. Activates CD74 transcription (PubMed:32855215). Exhibits intrinsic GTP-stimulated acetyltransferase activity (PubMed:11172716). Exhibits serine/threonine protein kinase activity: can phosphorylate the TFIID component TAF7, the RAP74 subunit of the general transcription factor TFIIF, histone

Target Details

	H2B at 'Ser-37' and other histones (in vitro) (PubMed:24036077). Has antiviral activity against Ebola virus and coronaviruses, including SARS-CoV-2 (PubMed:32855215). Induces resistance by up-regulation of the p41 isoform of CD74, which blocks cathepsin-mediated cleavage of viral glycoproteins, thereby preventing viral fusion (PubMed:32855215). {ECO:0000269|PubMed:11172716, ECO:0000269|PubMed:16600381, ECO:0000269|PubMed:17493635, ECO:0000269|PubMed:24036077, ECO:0000269|PubMed:32855215, ECO:0000269|PubMed:7749984, ECO:0000269|PubMed:8402893}., FUNCTION: [Isoform 3]: Exhibits dominant-negative suppression of MHC class II gene expression. {ECO:0000269|PubMed:12919287}.
Molecular Weight:	123.5 kDa
UniProt:	P33076
Pathways:	Cancer Immune Checkpoints

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

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