

Datasheet for ABIN3086774
ATIC Protein (AA 1-592) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	ATIC
Protein Characteristics:	AA 1-592
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ATIC protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MAPGQLALFS VSDKTGLVEF ARNLTALGLN LVASGGTAKA LRDAGLAVRD VSELTGFPEM
LGGRVKTLP AVHAGILARN IPEDNADMAR LDFNLIRVVA CNLYPFVKTV ASPGVTVEEA
VEQIDIGGVT LLRAAAKNHA RVTVCEPED YVVSTEMQS SESKDTSLT RRQLALKFT
HTAQYDEAIS DYFRKQYSGK VSQMPLRYGM NPHQTPAQLY TLQPKLPITV LNGAPGFNL
CDALNAWQLV KELKEALGIP AAASFKHVSP AGAAVGIPLS EDEAKVCMVY DLYKTLTPIS
AAYARARGAD RMSSFDFVA LSDVCDVPTA KIISREVSDG IAPGYEEEE LTILSKKNG
NYCVLQMDQS YKPDENEVRT LFGLHLSQKR NNGVVDKSLF SNVVTKNKDL PESALRDLIV
ATIAVKYTQS NSVCYAKNGQ VIGIGAGQQS RIHCTRLAGD KANYWWLRHH PQVLSMKFKT
GVKRAEISNA IDQYVTGTIG EDEDLIKWKA LFEEVPELLT EAEKKEWVEK LTEVSISSDA
FFPFRDNVDR AKRSGVAYIA APSGSAADKV VIEACDELGI ILAHTNLRLF HH

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®).

Purity:

> 80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Target Details

Target: ATIC

Alternative Name: ATIC ([ATIC Products](#))

Background: Bifunctional purine biosynthesis protein ATIC (AICAR transformylase/inosine monophosphate cyclohydrolase) (ATIC) [Cleaved into: Bifunctional purine biosynthesis protein ATIC, N-terminally processed] [Includes: Phosphoribosylaminoimidazolecarboxamide formyltransferase (EC 2.1.2.3) (5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase) (AICAR formyltransferase) (AICAR transformylase), Inosine 5'-monophosphate cyclohydrolase (IMP cyclohydrolase) (EC 3.5.4.10) (IMP synthase) (Inosinicase)],FUNCTION: Bifunctional enzyme that catalyzes the last two steps of purine biosynthesis (PubMed:11948179, PubMed:14756554). Acts as a transformylase that incorporates a formyl group to the AMP analog AICAR (5-amino-1-(5-phospho-beta-D-ribosyl)imidazole-4-carboxamide) to produce the intermediate formyl-AICAR (FAICAR) (PubMed:9378707, PubMed:11948179, PubMed:10985775). Can use both 10-formyldihydrofolate and 10-formyltetrahydrofolate as the formyl donor in this reaction (PubMed:10985775). Also catalyzes the cyclization of FAICAR to IMP (PubMed:11948179, PubMed:14756554). Is able to convert thio-AICAR to 6-mercaptapurine ribonucleotide, an inhibitor of purine biosynthesis used in the treatment of human leukemias (PubMed:10985775). Promotes insulin receptor/INSR autophosphorylation and is involved in INSR internalization (PubMed:25687571). {ECO:0000269|PubMed:10985775, ECO:0000269|PubMed:11948179, ECO:0000269|PubMed:14756554, ECO:0000269|PubMed:25687571, ECO:0000269|PubMed:9378707}.

Molecular Weight: 64.6 kDa

UniProt: [P31939](#)

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.

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Application Details

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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