



Datasheet for ABIN3088945

## ALKBH3 Protein (AA 1-286) (Strep Tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	ALKBH3
Protein Characteristics:	AA 1-286
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ALKBH3 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), ELISA, Western Blotting (WB)

#### Product Details

Sequence: MEEKRRRARV QGAWAAPVKS QAIAQPATTA KSHLHQKPGQ TWKNKEHHLS DREFVFKEPQ  
 QVVRRAPEPR VIDREGVYEI SLSPTGVSRV CLYPGFVDVK EADWILEQLC QDVPWKQRTG  
 IREDITYQP RLTAWYGELP YTYSRITMEP NPHWHPVLR LKNRIEENTG HTFNSLLCNL  
 YRNEKDSVDW HSDDEPSLGR CPIIASLSFG ATRTFEMRKK PPPEENGDYT YVERVKIPLD  
 HGTLLIMEGA TQADWQHRVP KEYHSREPRV NLTFRTVYPD PRGAPW

**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.

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#### 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.

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#### Purity:

>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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#### Endotoxin Level:

Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

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## Product Details

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Grade: Crystallography grade

## Target Details

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Target: ALKBH3

Alternative Name: ALKBH3 ([ALKBH3 Products](#))

Background: Alpha-ketoglutarate-dependent dioxygenase alkB homolog 3 (EC 1.14.11.33) (EC 1.14.11.54) (Alkylated DNA repair protein alkB homolog 3) (hABH3) (DEPC-1) (Prostate cancer antigen 1),FUNCTION: Dioxygenase that mediates demethylation of DNA and RNA containing 1-methyladenosine (m1A) (PubMed:12486230, PubMed:12594517, PubMed:16174769, PubMed:26863196, PubMed:26863410). Repairs alkylated DNA containing 1-methyladenosine (m1A) and 3-methylcytosine (m3C) by oxidative demethylation (PubMed:12486230, PubMed:12594517, PubMed:16174769, PubMed:25944111). Has a strong preference for single-stranded DNA (PubMed:12486230, PubMed:12594517, PubMed:16174769, PubMed:20714506). Able to process alkylated m3C within double-stranded regions via its interaction with ASCC3, which promotes DNA unwinding to generate single-stranded substrate needed for ALKBH3 (PubMed:22055184). Can repair exocyclic 3,N4-ethenocytosine adducts in single-stranded DNA (PubMed:25797601). Also acts on RNA (PubMed:12594517, PubMed:16174769, PubMed:26863196, PubMed:26863410, PubMed:16858410). Demethylates N(1)-methyladenosine (m1A) RNA, an epigenetic internal modification of messenger RNAs (mRNAs) highly enriched within 5'-untranslated regions (UTRs) and in the vicinity of start codons (PubMed:26863196, PubMed:26863410). Requires molecular oxygen, alpha-ketoglutarate and iron (PubMed:22055184, PubMed:16858410). {ECO:0000269|PubMed:12486230, ECO:0000269|PubMed:12594517, ECO:0000269|PubMed:16174769, ECO:0000269|PubMed:16858410, ECO:0000269|PubMed:22055184, ECO:0000269|PubMed:25797601, ECO:0000269|PubMed:25944111, ECO:0000269|PubMed:26863196, ECO:0000269|PubMed:26863410}.

Molecular Weight: 33.4 kDa

UniProt: [Q96Q83](#)

Pathways: [DNA Damage Repair](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies

## Application Details

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as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Comment:

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Restrictions:

For Research Use only

## Handling

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Format:

Liquid

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Buffer:

The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

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Handling Advice:

Avoid repeated freeze-thaw cycles.

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Storage:

-80 °C

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Storage Comment:

Store at -80°C.

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Expiry Date:

Unlimited (if stored properly)



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