Datasheet for ABIN3132753

ALKBH1 Protein (AA 1-389) (His tag)

1 Image

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Overview

Quantity:	1 mg
Target:	ALKBH1
Protein Characteristics:	AA 1-389
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ALKBH1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	MGKMAAAVAS LATLAAEPRE DAFRKLFRFY RQSRPGTADL GAVIDFSEAH LARSPKPGVP QVVRFPLNVS SVTERDAERV GLEPVSKWRA YGLEGYPGFI FIPNPFLPGC QRHWVKQCLK LYSQKPNVCN LDKHMTKEET QGLWEQSKEV LRSKEVTKRR PRSLLERLRW VTLGYHYNWD SKKYSADHYT PFPSDLAFLS EQVATACGFQ GFQAEAGILN YYRLDSTLGI HVDRSELDHS KPLLSFSFGQ SAIFLLGGLK RDEAPTAMFM HSGDIMVMSG FSRLLNHAVP RVLPHPDGEC LPHCLETPLP AVLPSNSLVE PCSVEDWQVC ATYLRTARVN MTVRQVLATG QDFPLEPVEE TKRDIAADGL CHLHDPNSPV KRKRLNPNS **Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**
Characteristics:	• Made in Germany - from design to production - by highly experienced protein experts. • Mouse Alkbh1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.

Product Details

	• 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. In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization). When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered. 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. The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	ALKBH1
Alternative Name:	Alkbh1 (ALKBH1 Products)

Target Details

Background:	Dioxygenase that acts as a DNA demethylase. Requires molecular oxygen, alpha-ketoglutarate and iron. Specifically demethylates DNA methylated on the 6th position of adenine (N(6)-methyladenosine) DNA (PubMed:27027282). N(6)-methyladenosine (m6A) DNA is present at young (less than 1.5 million years old) but not old (more than 6 million years old) L1 elements in embryonic stem cells and probably promotes silencing of such L1 elements (PubMed:27027282). Also able to repair alkylated single-stranded DNA and RNA containing 3-methylcytosine by oxidative demethylation, but with low activity. Also has DNA lyase activity and introduces double-stranded breaks at abasic sites: cleaves both single-stranded DNA and double-stranded DNA at abasic sites, with the greatest activity towards double-stranded DNA with two abasic sites. DNA lyase activity does not require alpha-ketoglutarate and iron and leads to the formation of an irreversible covalent protein-DNA adduct with the 5' DNA product (By similarity). DNA lyase activity is not required during base excision repair and class switch recombination of the immunoglobulin heavy chain during B lymphocyte activation (PubMed:23825659). May play a role in placental trophoblast lineage differentiation (PubMed:18163532). {ECO:0000250|UniProtKB:Q13686, ECO:0000269|PubMed:18163532, ECO:0000269|PubMed:23825659, ECO:0000269|PubMed:27027282}.
Molecular Weight:	44.7 kDa Including tag.
UniProt:	P0CB42
Pathways:	DNA Damage Repair

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 gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

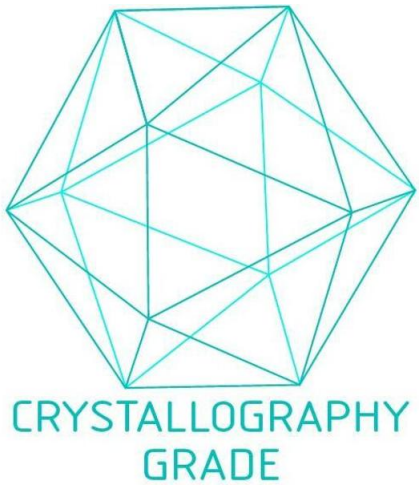

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process