

Datasheet for ABIN3092669

FTO Protein (AA 1-505) (His tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	FTO
Protein Characteristics:	AA 1-505
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FTO protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

Product Details

Sequence: MKRTPTAEEER EREAKKLRL LL EELEDTWLPY LTPKDDEFYQ QWQLKYPKLI LREASSVSEE
LHKEVQEAF L TLHKHGCLFR DLVRIQGKDL LTPVSRILIG NPGCTYKYN TRLFTVPWPV
KGSNIKHTEA EIAAACETFL KLNDYLQIET IQALEELA AK EKANEDAVPL CMSADFPRVG
MGSSYNGQDE VDIKSRAAYN VTLLNFM DPQ KMPYLKEEPY FGMGKMAVSW HH DENLVDRS
AVAVYSYSCE GPEEESEDDS HLEGRDPDIW HVGFKISWDI ETPGLAIPLH QGDCYFMLDD
LNATHQHCVL AGSQPRFSST HRVAECSTGT LDYILQRCQL ALQNVCD DVD NDDVSLKSFE
PAVLKQGEEI HNEVEFEWLR QFWFQGNRYR KCTDWWCQPM AQLEALWKKM EGV TNAVLHE
VKREGLPVEQ RNEILTALA SLTARQNLRR EWHARCQSRI ARTLPADQKP ECRPYWEKDD
ASMP L PFDLT DIVSELRGQL LEAKP

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Product Details

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
 - Human FTO Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
 - 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 receipt 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:	FTO
Alternative Name:	FTO (FTO Products)
Background:	<p>Dioxygenase that repairs alkylated DNA and RNA by oxidative demethylation. Has highest activity towards single-stranded RNA containing 3-methyluracil, followed by single-stranded DNA containing 3-methylthymine. Has low demethylase activity towards single-stranded DNA containing 1-methyladenine or 3-methylcytosine (PubMed:18775698, PubMed:20376003). Specifically demethylates N(6)-methyladenosine (m6A) RNA, the most prevalent internal modification of messenger RNA (mRNA) in higher eukaryotes (PubMed:22002720, PubMed:26458103). Has no activity towards 1-methylguanine. Has no detectable activity towards double-stranded DNA. Requires molecular oxygen, alpha-ketoglutarate and iron. Contributes to the regulation of the global metabolic rate, energy expenditure and energy homeostasis. Contributes to the regulation of body size and body fat accumulation (PubMed:18775698, PubMed:20376003). In particular, it is involved in the regulation of thermogenesis and the control of adipocyte differentiation into brown or white fat cells (PubMed:26287746). {ECO:0000269 PubMed:18775698, ECO:0000269 PubMed:20376003, ECO:0000269 PubMed:22002720, ECO:0000269 PubMed:26287746, ECO:0000269 PubMed:26458103}.</p>
Molecular Weight:	59.2 kDa Including tag.
UniProt:	Q9C0B1

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:	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
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Handling

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