

Datasheet for ABIN3093553
ALOXE3 Protein (AA 1-711) (Strep Tag)



[Go to Product page](#)

Overview

Quantity:	1 mg
Target:	ALOXE3
Protein Characteristics:	AA 1-711
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ALOXE3 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MAVYRLCVTT GPYLRAFTLD NISVTLVGTC GESPKQRLDR MGRDFAPGSV QKYKVRCTAE LGELLLLRVH KERYAFFRKD SWYCSRICVT EPDGSVSHFP CYQWIEGYCT VELRPGTART ICQDSLPLLL DHRTRELRAR QECYRWKIYA PGFPCMVDVN SFQEMESDKK FALTKTITTCV DQGDSSGNRY LPGFPMKIDI PSLMYMEPNV RYSATKTISL LFNAIPASLG MKLRGLLDRK GSWKKLDDMQ NIFWCHKFTT TKYVTEHWCE DHFFGYQYLN GVNPMVLHCI SSLPSKLPVT NDMVAPLLGQ DTCLQTELER GNIFLADYWI LAEAPTHCLN GRQQYVAAPL CLLWLSPQGA LVPLAIQLSQ TPGPDSPIFL PTDSEWDWLL AKTWVRNSEF LVHENNTHFL CTHLLCEAFA MATLRQLPLC HPIYKLLLP TRYTLQVNTI ARATLLNPEG LVDQVTSIGR QGLIYLMSTG LAHFTYTNFC LPDSLRARGV LAIPNYHYRD DGLKIWAAIE SFVSEIVGY YPSDASVQQD SELQAWTGEI FAQAFLGRES SGFPSRLCTP GEMVKFLTAI IFNCSAQHAA VNSGQHDFGA WMPNAPSSMR QPPPQTKGTT TLKTYLDTLP EVNISCNNLL LFWLVSQEPK DQRPLGTYPD EHFTEEAPRR SIAAFQSRLA QISRDIQERN QGLALPYTYL DPPLIENSVS I
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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.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

Product Details

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: ALOXE3

Alternative Name: ALOXE3 ([ALOXE3 Products](#))

Background: Hydroperoxide isomerase ALOXE3 (Epidermis-type lipoxygenase 3) (Epidermal LOX-3) (e-LOX-3) (eLOX-3) (Hydroperoxy dehydratase ALOXE3) (Hydroperoxy icosatetraenoate dehydratase) (EC 4.2.1.152) (Hydroperoxy icosatetraenoate isomerase) (EC 5.4.4.7),FUNCTION: Non-heme iron-containing lipoxygenase which is atypical in that it displays a prominent hydroperoxide isomerase activity and a reduced lipoxygenases activity (PubMed:12881489, PubMed:17045234, PubMed:20921226, PubMed:20923767). The hydroperoxide isomerase activity catalyzes the isomerization of hydroperoxides, derived from arachidonic and linoleic acid by ALOX12B, into hepoxilin-type epoxyalcohols and ketones (PubMed:12881489, PubMed:17045234, PubMed:20923767). In presence of oxygen, oxygenates polyunsaturated fatty acids, including arachidonic acid, to produce fatty acid hydroperoxides (PubMed:20921226). In the skin, acts downstream of ALOX12B on the linoleate moiety of esterified omega-hydroxyacyl-sphingosine (EOS) ceramides to produce an epoxy-ketone derivative, a crucial step in the conjugation of omega-hydroxyceramide to membrane proteins (PubMed:21558561). Therefore plays a crucial role in the synthesis of corneocytes lipid envelope and the establishment of the skin barrier to water loss (PubMed:21558561). In parallel, it may have a signaling function in barrier formation through the production of hepoxilins metabolites (PubMed:21558561). Also plays a role in adipocyte differentiation through hepoxilin A3 and hepoxilin B3 production which in turn activate PPARG (By similarity). Through the production of hepoxilins in the spinal cord, it may regulate inflammatory tactile allodynia (By similarity). {ECO:0000250|UniProtKB:D3ZKX9, ECO:0000250|UniProtKB:Q9WV07, ECO:0000269|PubMed:12881489, ECO:0000269|PubMed:17045234, ECO:0000269|PubMed:20921226, ECO:0000269|PubMed:20923767,

Target Details

	ECO:0000269 PubMed:21558561}.
Molecular Weight:	80.5 kDa
UniProt:	Q9BYJ1
Pathways:	Cell-Cell Junction Organization

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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 Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)



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