

Datasheet for ABIN3093702

ALOX12B Protein (AA 1-701) (Strep Tag)



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1 Image

Overview

Quantity:	1 mg
Target:	ALOX12B
Protein Characteristics:	AA 1-701
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ALOX12B protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MATYKVRVAT GTDLLSGTRD SISLTIVGTQ GESHKQLLNH FGRDFATGAV GQYTVQCPQD
LGELIIRLH KERYAFFPKD PWYCNVYQIC APNGRIYHFP AYQWMDGYET LALREATGKT
TADDSLPVLL EHRKEEIRAK QDFYHWRVFL PGLPSYVHIP SYRPPVRRHR NPNRPEWNGY
IPGFPILINF KATKFLNLLN RYSFLKTASF FVRLGPMALA FKVRGLLDCK HSWKRLKDIR
KIFPGKKSUV SEYVAEHWA E DTFYGYQYLN GVNPLIRRC TRIPDKFPVT DDMVAPFLGE
GTCLQAELEK GNIYLADYRI MEGIPTVELS GRKQHHCAPL CLLHFGPEGK MMPIAIQLSQ
TPGPDCEIFL PSDSEWDWLL AKTWVRYAEF YSHEAIAHLL ETHLIAEAFCLALLRNLP
MCHPLYKLLIPH TRYTVQINSI GRAVLLNEGG LSAKGMSLV EGFAGVMVRA LSELYDSL
YLPNDFVERGV QDLPGYYYRD DSLAVWNALE KYVTEIITYY YPSDAAVEGD PELQSWVQEI
FKECLLGRES SGFPRCLRTV PELIRYVTIV IYTCSAKHAA VNTGQMEFTA WMPNFPASMR
NPPIQTKGLT TLETFMDTLP DVKTTCTILL VLWTLRSREPD DRRPLGHFPD IHFVEEAPRR
SIEAFRQRLN QISHDIRQRN KCLPIPIYYL DPVLIENSIS I

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: ALOX12B

Alternative Name: ALOX12B ([ALOX12B Products](#))

Background: Arachidonate 12-lipoxygenase, 12R-type (12R-LOX) (12R-lipoxygenase) (EC 1.13.11.-) (Epidermis-type lipoxygenase 12),FUNCTION: Catalyzes the regio and stereo-specific incorporation of a single molecule of dioxygen into free and esterified polyunsaturated fatty acids generating lipid hydroperoxides that can be further reduced to the corresponding hydroxy species (PubMed:9837935, PubMed:9618483, PubMed:21558561). In the skin, acts upstream of ALOXE3 on the lineolate 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). May also play a role in the regulation of the expression of airway mucins (PubMed:22441738). {ECO:0000269|PubMed:21558561, ECO:0000269|PubMed:22441738, ECO:0000269|PubMed:9618483, ECO:0000269|PubMed:9837935}.

Molecular Weight: 80.4 kDa

UniProt: [O75342](#)

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

Application Details

guarantee though.

Comment: 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!

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