Datasheet for ABIN7554452

ALOX12 Protein (AA 1-663) (His tag)

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Overview

Quantity:	1 mg
Target:	ALOX12
Protein Characteristics:	AA 1-663
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ALOX12 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant ALOX12 Protein expressed in mammalian cells.
Sequence:	MGRYRIRVAT GAWLFSGSYN RVQLWLVGTR GEAELELQLR PARGEEEEFD HDVAEDLGLL QFVRLRKHHW LVDDAWFCDR ITVQGPGACA EVAFPCYRWV QGEDILSLPE GTARLPGDNA LDMFQKHREK ELKDRQQIYC WATWKEGLPL TIAADRKDDL PPNMRFHEEK RLDFEWTLKA GALEMALKRV YTLLSSWNCL EDFDQIFWGQ KSALAEKVRQ CWQDDELFSY QFLNGANPML LRRSTSLPSR LVLPSGMEEL QAQLEKELQN GSLFEADFIL LDGIPANVIR GEKQYLAAPL VMLKMEPNGK LQPMVIQIQP PNPSSPTPTL FLPSDPPLAW LLAKSWVRNS DFQLHEIQYH LLNTHLVAEV IAVATMRCLP GLHPIFKFLI PHIRYTMEIN TRARTQLISD GGIFDKAVST GGGGHVQLLR RAAAQLTYCS LCPPDDLADR GLLGLPGALY AHDALRLWEI IARYVEGIVH LFYQRDDIVK GDPELQAWCR EITEVGLCQA QDRGFPVSFQ SQSQLCHFLT MCVFTCTAQH AAINQGQLDW YAWVPNAPCT MRMPPPTTKE DVTMATVMGS LPDVRQACLQ MAISWHLSRR QPDMVPLGHH KEKYFSGPKP KAVLNQFRTD LEKLEKEITA RNEQLDWPYE YLKPSCIENS VTI **Sequence without tag. The proposed Purification-Tag is based on experiences with the**

Product Details

	expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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 try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	ALOX12
Alternative Name:	ALOX12 (ALOX12 Products)
Background:	Polyunsaturated fatty acid lipoxygenase ALOX12 (EC 1.13.11.-) (Arachidonate (12S)-lipoxygenase) (12S-LOX) (12S-lipoxygenase) (EC 1.13.11.31) (Arachidonate (15S)-lipoxygenase) (EC 1.13.11.33) (Linoleate (13S)-lipoxygenase) (Lipoxin synthase 12-LO) (EC 3.3.2.-) (Platelet-type lipoxygenase 12),FUNCTION: Catalyzes the regio and stereo-specific incorporation of molecular oxygen into free and esterified polyunsaturated fatty acids generating lipid hydroperoxides that can be further reduced to the corresponding hydroxy species (PubMed:17493578, PubMed:1851637, PubMed:8319693, PubMed:8500694, PubMed:18311922, PubMed:32404334). Mainly converts arachidonate ((5Z,8Z,11Z,14Z)-eicosatetraenoate) to the specific bioactive lipid (12S)-hydroperoxyeicosatetraenoate/(12S)-

Target Details

	HPETE (PubMed:17493578, PubMed:22984144, PubMed:24282679, PubMed:8319693, PubMed:8500694). Through the production of bioactive lipids like (12S)-HPETE it regulates different biological processes including platelet activation (PubMed:8319693, PubMed:8500694). It can also catalyze the epoxidation of double bonds of polyunsaturated fatty acids such as (14S)-hydroperoxy-docosahexaenoate/(14S)-HPDHA resulting in the formation of (13S,14S)-epoxy-DHA (PubMed:23504711). Furthermore, it may participate in the sequential oxidations of DHA ((4Z,7Z,10Z,13Z,16Z,19Z)-docosahexaenoate) to generate specialized pro-resolving mediators (SPMs) like resolvin D5 ((7S,17S)-diHPDHA) and (7S,14S)-diHPDHA, that actively down-regulate the immune response and have anti-aggregation properties with platelets (PubMed:32404334). An additional function involves a multistep process by which it transforms leukotriene A4/LTA4 into the bioactive lipids lipoxin A4/LXA4 and lipoxin B4/LXB4, both are vasoactive and LXA4 may regulate neutrophil function via occupancy of specific recognition sites (PubMed:8250832). Can also peroxidize linoleate ((9Z,12Z)-octadecadienoate) to (13S)-hydroperoxyoctadecadienoate/ (13S-HPODE) (By similarity). Due to its role in regulating both the expression of the vascular endothelial growth factor (VEGF, an angiogenic factor involved in the survival and metastasis of solid tumors) and the expression of integrin beta-1 (known to affect tumor cell migration and proliferation), it can be regarded as protumorigenic (PubMed:9751607, PubMed:16638750, PubMed:22237009). Important for cell survival, as it may play a role not only in proliferation but also in the prevention of apoptosis in vascular smooth muscle cells (PubMed:23578768). {ECO:0000250|UniProtKB:P39655, ECO:0000269|PubMed:16638750, ECO:0000269|PubMed:17493578, ECO:0000269|PubMed:18311922, ECO:0000269|PubMed:1851637, ECO:0000269|PubMed:22237009, ECO:0000269|PubMed:22984144, ECO:0000269|PubMed:23504711, ECO:0000269|PubMed:23578768, ECO:0000269|PubMed:24282679, ECO:0000269|PubMed:32404334, ECO:0000269|PubMed:8250832, ECO:0000269|PubMed:8319693, ECO:0000269|PubMed:8500694, ECO:0000269|PubMed:9751607}.
Molecular Weight:	75.7 kDa
UniProt:	P18054
Pathways:	Positive Regulation of Endopeptidase Activity

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for

Application Details

	functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition 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:	12 months