

ALOX12 Protein, Human, Recombinant (His)

General Information

| | |
|-----------------------|---|
| Synonyms: | LOG12;Arachidonate (15S)-lipoxygenase;Lipoxin synthase 12-LO;Polyunsaturated fatty acid lipoxygenase ALOX12;12LO;Linoleate (13S)-lipoxygenase;Platelet-type lipoxygenase 12; Arachidonate (12S)-lipoxygenase (12S-LOX;12S-lipoxygenase);ALOX12 |
| Protein Construction: | 1-663 aa |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | P18054 |
| Molecular Weight: | 79.8 kDa (predicted) |
| AA Sequence: | MGRYRIRVATGAWLFGSYNRVQLWLVGTRGEAELELQLRPARGEEEFDHDVAEDLGLLQFVRLRKHHWL VDDAWFCDRITVQGPACAEVAFPCYRWVQGEDILSLPEGTARLPGDNALDMFQKHREKELKDRQIYCWA TWKEGLPLTIAADRKDDLPPNMRHFEEKRLDFEWTLKAGALEMALKRVYTLSSWNCLEDFDQIFWGQKSAL AEKVRQCWQDDELFSYQFLNGANPMLLRSTSLPSRLVLPSPGMEELQAQLEKELQNGSLFEADFILLDGIPAN VIRGEKQYLAAPLVMLKMEPNGKLQPMVIQIPPNSSPTPTLFLPSDPPPLAWLLAKSWVRNSDFQLHEIQYH LLNTHLVAEVIIVATMRCLPGLHPIFKFLIPHRYTMEINTRARTQLISDGGIFDKAVSTGGGGHVQLLRRAAAQ LTYCSLCPDDLADRGLLGLPGALYAHDALRLWEIARYVEGIVHLFYQRDDIVKGDPELQAWCREITEVGLCQ AQDRGFPVSFQSQSLCHFLTMCVFTCTAQHAAINQGGQLDWYAWVPNAPCTMRMPPPTTKEDVTMATVM GSLPDVRQACLQMAISWHLRRQPDMVPLGHHKEKYFSGPKPKAVLNQFRDLEKLEKEITARNEQLDWPY EYLPSCIENSVTI |

QC Testing

| | |
|----------------------|---|
| Biological Activity: | Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity: | > 90% as determined by SDS-PAGE. |
| Endotoxin: | < 1.0 EU/μg of the protein as determined by the LAL method. |
| Formulation: | Tris-based buffer, 50% glycerol |

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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. Mainly converts arachidonate ((5Z,8Z,11Z,14Z)-eicosatetraenoate) to the specific bioactive lipid (12S)-hydroperoxyeicosatetraenoate/(12S)-HPETE. Through the production of bioactive lipids like (12S)-HPETE it regulates different biological processes including platelet activation. 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. 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 downregulate the immune response and have anti-aggregation properties with platelets. 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. Can also peroxidize linoleate ((9Z,12Z)-octadecadienoate) to (13S)-hydroperoxyoctadecadienoate/ (13S)-HPODE). 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. 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481