

## 5-Lipoxygenase Active Protein | ALOX5 active protein

5-Lipoxygenase protein

|                              |                      |
|------------------------------|----------------------|
| CATALOG #<br><b>AAA14373</b> | HOST<br><b>Human</b> |
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### PRODUCT SYNONYMS

5-Lipoxygenase; 5-Lipoxygenase protein; 5-Lipoxygenase Antigen; 5 Lipoxygenase Recombinant Protein; ALOX5 active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Form/Format             | Supplied in 100mM Tris, pH8.0, 5mM EGTA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Concentration           | 604 units/ml<br>22.7mg/ml protein<br>Specific Activity: 26.61 Units per mg Protein. (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Sequence Length         | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Biohazard               | Recombinant protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Grade                   | Recombinant human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Source                  | Recombinant enzyme isolated from baculovirus over expression system in Sf21 cells                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Contaminants            | Not determined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Protein Type            | Recombinant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Bioactivity             | 20 units/mg protein - One unit is defined as the amount of enzyme that consumes 1.0 nmol of oxygen per min at 25 DEG C in 50 mM Tris-HCl, 100 uM arachidonate, 2 mM CaCl <sub>2</sub> , 1 mM ATP, 250 uM oxygen. Oxygen consumption can be measured using a oxygraph equipped                                                                                                                                                                                                                                                  |
| Biological Significance | 5-lipoxygenase (5-LO) catalyzes the formation of 5(S)-HpETE from arachidonic acid and its subsequent conversion to leukotriene A <sub>4</sub> . It is localized in the cytosol of resting human and rat peripheral blood neutrophils, whereas it is found in the nucleus in rat basophilic leukemia cells and human alveolar macrophages. Upon stimulation of the cell, 5-LO translocates to the nuclear membrane where it is found in association with 5-LO activating protein (FLAP) and with the 85 kDa cPLA <sub>2</sub> . |
| Expression System       | Baculovirus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Dry Ice Note            | The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Preparation and Storage | Upon receipt store at -70°C.<br>Upon initial thaw, aliquot into single-use volumes and freeze at -70°C.<br>Shipping: Dry Ice.                                                                                                                                                                                                                                                                                                                                                                                                  |

### ADDITIONAL INFORMATION

|                                                    |                                                                                                                                                                                                 |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Categories/Family for ALOX5 active protein | Proteases; Inhibitors; & Enzymes                                                                                                                                                                |
| References                                         | <a href="#">Impact of myeloperoxidase-derived oxidants on the product profile of human 5-lipoxygenase</a> . Josefin Zschaler, Juliane Dorow, Louisa Schöpe, Uta Ceglarek, Jürgen Arnhold (2015) |

NCBI AND UNIPROT INFORMATION

|                                  |                                                |
|----------------------------------|------------------------------------------------|
| NCBI GI #                        | 187167                                         |
| NCBI GeneID                      | 240                                            |
| UniProt Accession #              | P09917; Q5JQ14; B7ZLS0; E5FPY5; E5FPY7; E5FPY8 |
| Molecular Weight                 | 78,000 kDa                                     |
| NCBI Official Full Name          | 5-lipoxygenase, partial                        |
| NCBI Official Synonym Full Names | arachidonate 5-lipoxygenase                    |
| NCBI Official Symbol             | ALOX5                                          |
| NCBI Official Synonym Symbols    | 5-LO; 5LPG; LOG5; 5-LOX                        |
| NCBI Protein Information         | arachidonate 5-lipoxygenase                    |
| UniProt Protein Name             | Arachidonate 5-lipoxygenase                    |
| UniProt Gene Name                | <b>ALOX5</b>                                   |
| UniProt Synonym Gene Names       | LOG5; 5-LO; 5-lipoxygenase                     |
| UniProt Entry Name               | LOX5_HUMAN                                     |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/human-active-protein/5-lipoxygenase/14373>