Datasheet for ABIN968116

# anti-ALOX5 antibody (AA 442-590)

2 Images | 5 Publications

Go to Product page

## Overview

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|---|---|
| Quantity: | 50 µg |
| Target: | ALOX5 |
| Binding Specificity: | AA 442-590 |
| Reactivity: | Human, Rat, Mouse, Chicken |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This ALOX5 antibody is un-conjugated |
| Application: | Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunofluorescence (IF) |

## Product Details

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|---|---|
| Immunogen: | Human 5-Lipoxygenase aa. 442-590 |
| Clone: | 33-5 |
| Isotype: | IgG1 |
| Cross-Reactivity: | Chicken, Rat (Rattus), Mouse (Murine) |
| Characteristics: | 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.<br>2. Please refer to us for technical protocols.<br>3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.<br>4. Source of all serum proteins is from USDA inspected abattoirs located in the United States. |

## Product Details

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| Purification: | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. |

## Target Details

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| Target: | ALOX5 |
| Alternative Name: | 5-Lipoxygenase (ALOX5 Products) |
| Background: | 5-Lipoxygenase (5-LO) is the initial enzyme that converts arachidonic acid to leukotrienes, which are important inflammatory and vasoconstrictive metabolites. It is activated in response to a number of stimuli, such as differentiation and allergen challenges. The 5-LO gene, abundantly expressed in placenta, lung, and leukocytes, encodes a protein of 674 amino acids with an apparent molecular weight of 78kDa. 5-LO is a Ca2+ and ATP-dependent enzyme that translocates from the cytosol to either a nuclear or plasma membrane compartment following activation. A proline-rich domain of 5-LO (amino acids 566-577) has been identified as a binding site for the PTyr-binding protein, Grb2. This Grb2 site links tyrosine kinases with activation and redistribution of 5-LO. Furthermore, tyrosine kinase inhibitors increase the activity of 5-LO and block the enzyme's subcellular redistribution. |
| Molecular Weight: | 79 kDa |

## Application Details

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| Comment: | Related Products: ABIN967389, ABIN968554 |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Concentration: | 250 µg/mL |
| Buffer: | Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide. |
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage: | -20 °C |
| Storage Comment: | Store undiluted at -20°C. |

## Publications

Product cited in:

Hundley, Prasad, Beaven: "Elevated levels of cyclooxygenase-2 in antigen-stimulated mast cells is associated with minimal activation of p38 mitogen-activated protein kinase." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 167, Issue 3, pp. 1629-36, (2001) (PubMed).

Zaitsu, Hamasaki, Matsuo, Kukita, Tsuji, Miyazaki, Hayasaki, Muro, Yamamoto, Kobayashi, Ichimaru, Kohashi, Miyazaki: "New induction of leukotriene A(4) hydrolase by interleukin-4 and interleukin-13 in human polymorphonuclear leukocytes." in: **Blood**, Vol. 96, Issue 2, pp. 601-9, ( 2000) (PubMed).

Lepley, Muskardin, Fitzpatrick: "Tyrosine kinase activity modulates catalysis and translocation of cellular 5-lipoxygenase." in: **The Journal of biological chemistry**, Vol. 271, Issue 11, pp. 6179-84, (1996) (PubMed).

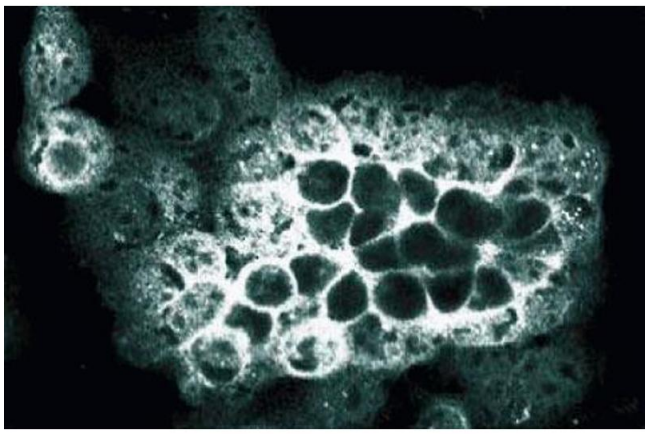
Lepley, Fitzpatrick: "5-Lipoxygenase contains a functional Src homology 3-binding motif that interacts with the Src homology 3 domain of Grb2 and cytoskeletal proteins." in: **The Journal of biological chemistry**, Vol. 269, Issue 39, pp. 24163-8, (1994) (PubMed).

Matsumoto, Funk, Rådmark, Höög, Jörnvall, Samuelsson: "Molecular cloning and amino acid sequence of human 5-lipoxygenase." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 85, Issue 1, pp. 26-30, (1988) (PubMed).

## Images


**Western Blotting**

**Image 1.** Western blot analysis of 5-Lipoxygenase on SL-29 lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilultion of 5-Lipoxygenase.



**Immunofluorescence**

**Image 2.** Immunofluorescence staining of A431 cells