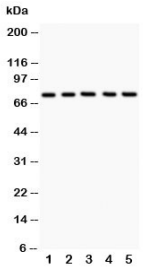
12 Lipoxygenase Antibody / ALOX12 (R30558)

Catalog No.	Formulation	Size
R30558	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	P18054
Applications	Western Blot : 0.5-1ug/ml
Limitations	This 12 Lipoxygenase antibody is available for research use only.



12 Lipoxygenase Antibody Human Cell WB. Western blot testing of 1) human A549, 2) human MCF-7, 3) human COLO320, 4) human Jurkat, and 5) human HeLa cell lysates with 12 Lipoxygenase antibody. A distinct immunoreactive band is detected at approximately 75 kDa in all samples, consistent with the expected molecular weight of 12-Lipoxygenase (ALOX12). The results demonstrate specific detection of this lipid peroxidation enzyme, which catalyzes arachidonic acid metabolism to generate bioactive lipid mediators involved in inflammatory signaling, platelet function, oxidative stress, ferroptosis, and regulation of cellular homeostasis.

Description

12 Lipoxygenase Antibody recognizes 12-Lipoxygenase, also known as ALOX12 or Arachidonate 12-Lipoxygenase, a non-heme iron-containing dioxygenase that catalyzes the oxidation of arachidonic acid to generate 12S-hydroxyeicosatetraenoic acid (12S-HETE). This bioactive lipid mediator regulates platelet activation, inflammatory signaling, oxidative stress responses, and vascular homeostasis. Through its central role in lipid metabolism and eicosanoid biosynthesis, 12 Lipoxygenase Antibody is widely used to investigate lipid signaling pathways, redox biology, and inflammatory disease mechanisms.

12-Lipoxygenase is expressed in platelets, megakaryocytes, epithelial tissues, neurons, endothelial cells, and selected immune cell populations. The enzyme contributes to platelet aggregation, cell proliferation, migration, differentiation, apoptosis, and communication between inflammatory and metabolic signaling pathways. In recent years, 12-Lipoxygenase has also emerged as an important regulator of ferroptosis, an iron-dependent form of programmed cell death driven by lipid peroxidation. These diverse biological functions make 12 Lipoxygenase Antibody valuable for research involving cardiovascular biology, immunology, cancer, metabolism, and oxidative stress.

Altered expression or activity of 12-Lipoxygenase has been implicated in numerous pathological conditions including atherosclerosis, thrombosis, diabetes, asthma, psoriasis, neurodegenerative disorders, ischemic injury, and several human cancers. Increased enzyme activity has been associated with tumor progression, angiogenesis, metastatic potential, and resistance to therapy, while dysregulated lipid peroxidation contributes to tissue injury and inflammatory disease. Consequently, 12 Lipoxygenase Antibody is increasingly utilized to investigate disease mechanisms, biomarker discovery, and therapeutic strategies targeting lipid metabolism and oxidative signaling pathways.

NSJ Bioreagents offers highly validated 12 Lipoxygenase Antibody products for reliable detection of endogenous 12-Lipoxygenase in human and animal samples. These antibodies support studies of arachidonic acid metabolism, lipid mediator biology, platelet function, ferroptosis, inflammatory signaling, oxidative stress, and related cellular pathways, providing researchers with dependable tools for basic and translational research.

Learn more about ALOX12 function, lipid peroxidation and oxidative stress on our ALOX12 Antibody / Lipid Peroxidation Enzyme Antibody page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the 12 Lipoxygenase antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human ALOX12 (HHKEKYFSGPKPKAVLNQFR) was used as the immunogen for this 12 Lipoxygenase antibody.

Storage

After reconstitution, the 12 Lipoxygenase antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ALOX12 antibody, 12S-Lipoxygenase antibody, Arachidonate 12-Lipoxygenase antibody, Platelet-Type Lipoxygenase antibody, 12-LOX antibody, Linoleate 12-Lipoxygenase antibody

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