

PRODUCT INFORMATION



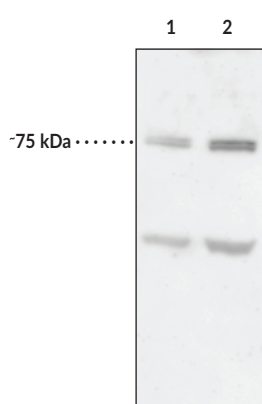
12-Lipoxygenase (mouse) Polyclonal Antibody

Item No. 32822

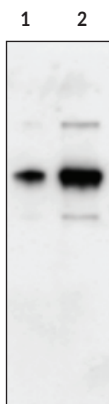
Overview and Properties

Contents:	This vial contains 500 µg of protein A-purified polyclonal antibody.
Synonyms:	Alox12, Arachidonate 12-lipoxygenase, 12-LO, 12-LOX
Immunogen:	Full-length recombinant mouse 12-lipoxygenase (leukocyte-type)
Cross Reactivity:	(+) Human 15-Lipoxygenase-2
Species Reactivity:	(+) Mouse, porcine
Uniprot No.:	P39654
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	ELISA and Western blot (WB); the recommended starting dilution is 1:200 for ELISA and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Porcine leukocyte lysate (10 µg)
Lane 2: Porcine leukocyte lysate (25 µg)



Lane 1: Recombinant 12-Lipoxygenase (leukocyte-type; mouse) protein (1 ng)
Lane 2: Recombinant 12-Lipoxygenase (leukocyte-type; mouse) protein (5 ng)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

12-Lipoxygenase (12-LO) is one of several LOs that catalyzes the peroxidation of polyunsaturated fatty acids in a position-specific manner.¹ There are four 12-LO subtypes, encoded by distinct genes, that can be categorized according to their tissue expression in mice.² Leukocyte-type 12-LO is encoded by *Alox15* in mice and shares 74% sequence identity with human ALOX15 but, in contrast to its human ortholog, encodes a 12-lipoxygenating ALOX15 isoform.³⁻⁵ Leukocyte-type 12-LO exists as a single polypeptide chain composed of an N-terminal regulatory domain and a C-terminal catalytic domain.¹ It catalyzes the oxidation of arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) to 12(S)-HpETE (Item No. 44570) and, to a lesser extent, 15(S)-HpETE (Item No. 44720), which are further reduced to 12(S)-HETE (Item No. 34570) and 15(S)-HETE (Item No. 34720), respectively.^{1,6,7} Other substrates of leukocyte-type 12-LO include eicosapentaenoic acid, docosahexaenoic acid, linoleic acid, and γ -linolenic acid, which are oxygenated at various positions in a substrate-dependent manner.⁸ Leukocyte-type 12-LO is constitutively expressed at high levels in resident peritoneal macrophages, and its activity is increased by the Th2 cytokines IL-4 and IL-13 *in vitro*.⁵ *Alox15*^{-/-} mice are protected from increases in systolic blood pressure in a model of hypertension induced by L-NAME (Item No. 80210).⁹ Cayman's 12-Lipoxygenase (mouse) Polyclonal Antibody can be used for ELISA and Western blot (WB) applications. The antibody recognizes 12-LO (leukocyte-type) at ~73 kDa from porcine and mouse samples.

References

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