PRODUCT INFORMATION

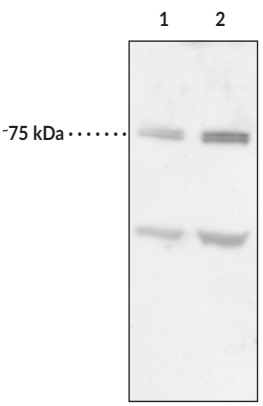
12-Lipoxygenase (leukocyte-type; mouse) Polyclonal Antibody

Item No. 32822

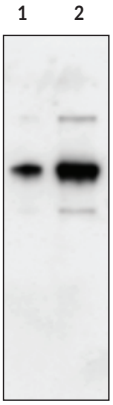
Overview and Properties

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)
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)

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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 (leukocyte-type; 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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