

PRODUCT INFORMATION



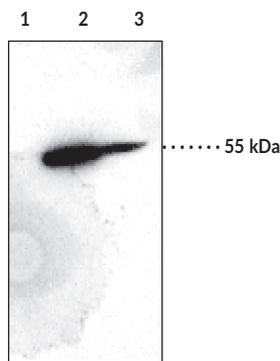
Aldehyde Dehydrogenase Polyclonal Antiserum

Item No. 160720

Overview and Properties

Contents:	This vial contains polyclonal antiserum.
Synonyms:	ALDH1, Retinal Aldehyde Dehydrogenase, Thromboxane B ₂ 11-dehydrogenase, TXB ₂ 11-dehydrogenase
Immunogen:	Human erythrocyte ALDH
Cross Reactivity:	(+) Human, mouse
Species Reactivity:	(+) ALDH
Form:	Lyophilized solid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	Polyclonal antiserum when reconstituted in 100 µl deionized water
Host:	Rabbit
Applications:	Western blot (WB); the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Mouse live homogenate 10k x g supernatant (30 µg)

Lane 2: Porcine liver homogenate 10k x g supernatant (30 µg)

Lane 3: Ovine liver homogenate 10 k x g supernatant (30µg)

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
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Aldehyde dehydrogenase (ALDH) is an enzyme that catalyzes the oxidation of various aldehydes to their corresponding carboxylic acid.¹ There are 19 human ALDH isozymes, which have varying expression levels, subcellular localization, tissue distribution, cofactor preference, and substrate specificity.² ALDH exists as a homodimer or homotetramer and is composed of a cofactor-binding domain, which binds NAD⁺ or NADP⁺, a catalytic domain, and an oligomerization domain. ALDH has protective roles in alcohol detoxification and oxidative stress, regulatory roles in the function of normal stem cells and tumor-initiating stem-like cells, and a biosynthetic role in the formation of retinoic acid.^{1,2} It also catalyzes the catabolism of thromboxane B₂ (TXB₂; Item No. 19030) to 11-dehydro TXB₂ (Item No. 19500).³ Mutations in the genes encoding ALDH isozymes are associated with a variety of human conditions, including alcohol intolerance, Parkinson's disease, and gout.¹ Cayman's Aldehyde Dehydrogenase Polyclonal Antiserum can be used for Western blot (WB) applications. The antibody recognizes ALDH at 55 kDa from human and mouse samples.

References

1. Shortall, K., Djeghader, A., Magner, E., *et al.* Insights into aldehyde dehydrogenase enzymes: A structural perspective. *Front. Mol. Biosci.* **8**, 659550 (2021).
2. Vassalli, G. Aldehyde dehydrogenases: Not just markers, but functional regulators of stem cells. *Stem Cells Int.* 3904645 (2019).
3. Westlund, P., Fylling, A.C., Cederlund, E., *et al.* 11-Hydroxythromboxane B₂ dehydrogenase is identical to cytosolic aldehyde dehydrogenase. *FEBS Lett.* **345(2-3)**, 99-103 (1994).

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