

PRODUCT INFORMATION



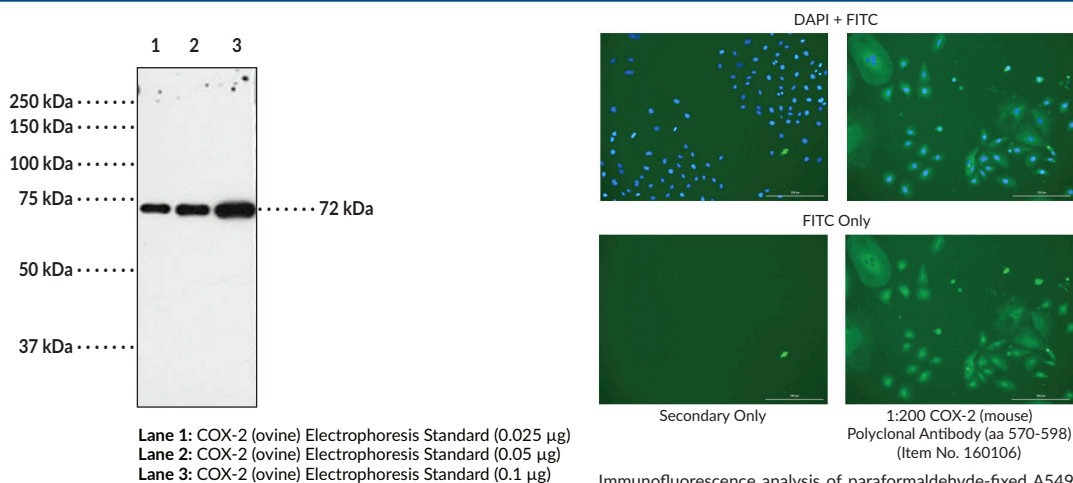
COX-2 (human) Polyclonal Antibody

Item No. 160107

Overview and Properties

Contents:	This vial contains 500 µg protein A-purified polyclonal antibody.
Synonyms:	Cyclooxygenase 2, PGHS-2, Prostaglandin H Synthase 2
Immunogen:	Peptide from the C-terminal region of human COX-2
Cross Reactivity:	(+) COX-2; (-) COX-1
Species Reactivity:	(+) Human, mouse, ovine
Uniprot No.:	P35354
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
Application:	Immunofluorescence (IF) and Western blot (WB); the recommended starting dilution is 1:200 for IF and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Immunofluorescence analysis of paraformaldehyde-fixed A549 cells. After incubation with COX-2 (human) Polyclonal Antibody at a dilution of 1:200 (or negative control), cells were incubated with FITC-labeled anti-rabbit IgG (Item No. 10006588), followed by DAPI nuclear stain. Images show FITC alone or both fluorescence channels to highlight nuclear staining (where applicable).

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

Cyclooxygenase 2 (COX-2) is a bifunctional enzyme that exhibits both COX and peroxidase activities and catalyzes the first step in the biosynthesis of prostaglandins, thromboxanes, and prostacyclins.^{1,2} The COX component converts arachidonic acid to the hydroperoxy endoperoxide prostaglandin G₂ (PGG₂; Item No. 17010), and the peroxidase component reduces the endoperoxide to the corresponding alcohol PGH₂ (Item No. 17020). COX2 expression is induced by a variety of stimuli, including phorbol esters, LPS, and cytokines and is responsible for the biosynthesis of PGs under acute inflammatory conditions.^{3,4} Thus, COX-2 has been the focus of attention for nonsteroidal anti-inflammatory drug (NSAID) development. Cayman's COX-2 (human) Polyclonal Antibody can be used for immunofluorescence (IF) and Western blot (WB) applications. The antibody recognizes a unique C-terminal region of COX-2 that is not present in COX-1, specifically detecting COX-2 at 72 kDa from human, mouse, and ovine samples.

References

1. Nugteren, D.H. and Hazelhof, E. Isolation and properties of intermediates in prostaglandin biosynthesis. *Biochim. Biophys. Acta* **326(3)**, 448-461 (1973).
2. Hamberg, M. and Samuelsson, B. Detection and isolation of an endoperoxide intermediate in prostaglandin biosynthesis. *Proc. Natl. Acad. Sci. USA* **70(3)**, 899-903 (1973).
3. Kang, Y.-J., Mbonye, U.R., DeLong, C.J., *et al.* Regulation of intracellular cyclooxygenase levels by gene transcription and protein degradation. *Prog. Lipid Res.* **46(2)**, 108-25 (2007).
4. Blobaum, A.L. and Marnett, L.J. Structural and functional basis of cyclooxygenase inhibition. *J. Med. Chem.* **50(7)**, 1425-1441 (2007).

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