

PRODUCT INFORMATION



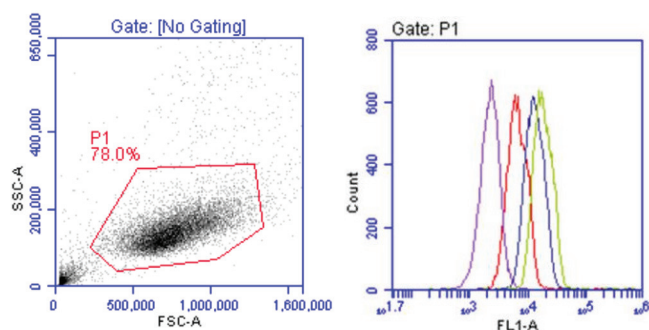
COX-2 (mouse) Polyclonal FITC Antibody

Item No. 10010096

Overview and Properties

Contents:	This vial contains 100 µg of fluorescein-labeled, peptide affinity-purified IgG.
Synonyms:	Cyclooxygenase 2, PGHS2, Prostaglandin H Synthase 2
Immunogen:	Synthetic peptide corresponding to the C-terminal region of mouse COX-2
Cross Reactivity:	(+) COX-2; (-) COX-1
Species Reactivity:	(+) Human, mouse, and rat
Uniprot No.:	P35354
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	Flow cytometry (FC), Immunofluorescence (IF), and Western blot (WB); the recommended starting dilution these applications is 1:250-1:500. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Cells used: RAW 264.7 cells

Purple: Secondary Control
Red: Normal Rabbit IgG-FITC (1 µg)
Blue: COX-2 (mouse) Polyclonal FITC Antibody (5 µg)
Green: COX-2 (mouse) Polyclonal FITC Antibody (10 µg)

RAW264.7 cells were fixed with 4% buffered formaldehyde, washed, and then permeabilized with 0.1% saponin in the presence of 1% bovine serum. Cells were probed with indicated concentrations of COX-2 (mouse) Polyclonal FITC Antibody (Item No. 10010096), washed and analyzed by flow cytometry in parallel with an unrelated FITC labeled goat polyclonal antibody (Secondary Control).

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 (mouse) Polyclonal FITC Antibody can be used for flow cytometry (FC), 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 in human, mouse, and rat 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)**, 108-125 (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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