

# PRODUCT INFORMATION



## COX-1 Monoclonal PE Antibody (Clone CX111)

Item No. 160120

### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of PE-labeled purified monoclonal antibody.
<b>Synonyms:</b>	Cyclooxygenase 1, PGHS-1, Prostaglandin Endoperoxide Synthase 1, Prostaglandin G/H Synthase 1, Prostaglandin H2 Synthase 1
<b>Immunogen:</b>	Purified ovine COX-1
<b>Cross Reactivity:</b>	(+) Ovine COX-2; (-) Mouse COX-2
<b>Species Reactivity:</b>	(+) Human, bovine, mouse, ovine, and rat; (-) Other species not tested
<b>Uniprot No.:</b>	P05979
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Clone:</b>	CX111
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG2b
<b>Applications:</b>	Flow Cytometry (FC) and Immunofluorescence (IF); the recommended starting dilution for FC and IF is 1:20. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

### Description

Cyclooxygenase 1 (COX-1) is a bifunctional enzyme that exhibits both COX and peroxidase activities.<sup>1,2</sup> It is composed of an N-terminal signal peptide, an EGF-like domain, a membrane binding domain, a catalytic domain, and a C-terminal tail.<sup>3</sup> COX-1 is constitutively expressed in the gastrointestinal tract, kidney, spleen, liver, and lung and localizes to the endoplasmic reticulum.<sup>4,5</sup> The COX component converts arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) to a hydroperoxyl endoperoxide prostaglandin G<sub>2</sub> (PGG<sub>2</sub>; Item No. 17010) and the peroxidase component reduces the endoperoxide to the corresponding alcohol PGH<sub>2</sub> (Item No. 17020), the precursor of PGs, thromboxanes, and prostacyclins.<sup>1,2</sup> COX-1 is the target of many non-steroidal anti-inflammatory drugs (NSAIDs) and is responsible for the undesirable gastrointestinal and renal side effects, such as ulcer formation and reductions in the glomerular filtration rate, respectively.<sup>6,7</sup> Cayman's COX-1 Monoclonal PE Antibody (Clone CX111) is composed of an anti-COX-1 monoclonal antibody conjugated to phycoerythrin (PE) and can be used for flow cytometry (FC) and immunofluorescence (IF) applications.

### References

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2. Hamberg, M. and Samuelsson, B. *Proc. Natl. Acad. Sci. USA* **70(3)**, 899-903 (1973).
3. Smith, W.L. and DeWitt, D.L. *Adv. Immunol.* **62**, 167-215 (1995).
4. Seibert, K., Zhang, Y., Leahy, K., et al. *Proc. Natl. Acad. Sci. USA* **91(25)**, 12013-12017 (1994).
5. Morita, I., Schindler, M., Regier, M.K., et al. *J. Biol. Chem.* **270(18)**, 10902-10908 (1995).
6. Gierse, J.K., Hauser, S.D., Creely, D.P., et al. *Biochem. J.* **305(Pt. 2)**, 379-484 (1995).
7. Frölich, J.C. *Trends Pharmacol. Sci.* **18(1)**, 30-34 (1997)

**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.

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