

# PRODUCT INFORMATION



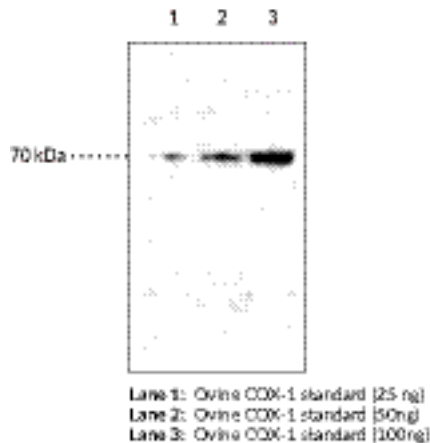
## COX-1 (ovine) Electrophoresis Standard

Item No. 360100

### Overview and Properties

<b>Contents:</b>	This vial contains 5 µg purified COX-1.
<b>Synonyms:</b>	Cyclooxygenase 1, PGHS-1, Prostaglandin Endoperoxide Synthase 1, Prostaglandin G/H Synthase 1, Prostaglandin H2 Synthase 1
<b>Form:</b>	Liquid
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	20 mM Tris-HCl buffer, pH 8.0
<b>Purity:</b>	≥95%
<b>Applications:</b>	This enzyme has been denatured and has no catalytic activity. It can be used as a standard for Western blots (WB) and electrophoresis.

### Image



**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

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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> This product is intended to be used as a standard for Western blot (WB) and electrophoresis. This enzyme has been carefully purified to exclude all unrelated proteins and may not be catalytically active.

## References

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4. Seibert, K., Zhang, Y., Leahy, K., et al. Pharmacological and biochemical demonstration of the role of cyclooxygenase 2 in inflammation and pain. *Proc. Natl. Acad. Sci. USA* **91(25)**, 12013-12017 (1994).
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7. Frölich, J.C. A classification of NSAIDs according to the relative inhibition of cyclooxygenase isoenzymes. *Trends Pharmacol. Sci.* **18(1)**, 30-34 (1997).

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