

# PRODUCT INFORMATION



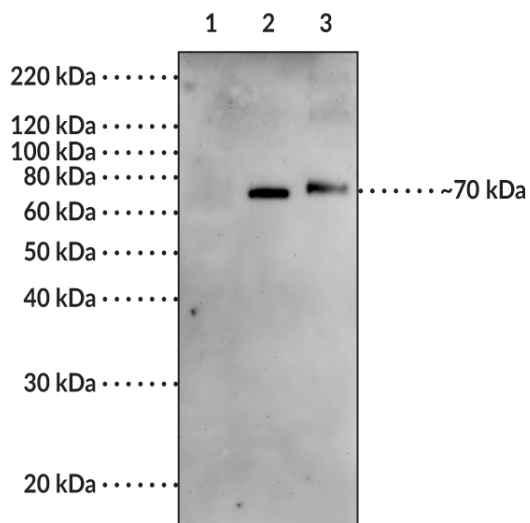
## Goat Anti-COX-2 (human) Affinity-Purified Polyclonal Antibody

Item No. 100034

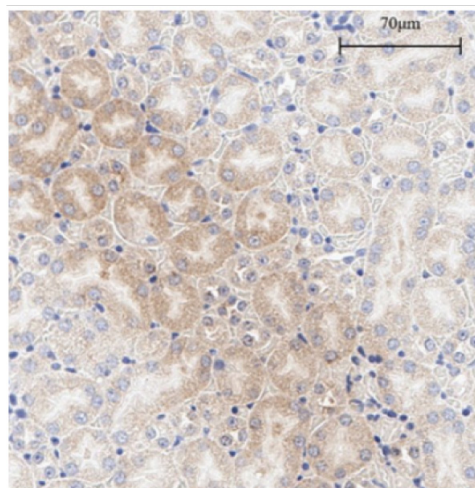
### Overview and Properties

<b>Contents:</b>	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
<b>Synonyms:</b>	Cyclooxygenase-2, PGHS-2, Prostaglandin H Synthase-2
<b>Immunogen:</b>	Synthetic peptide from the C-terminal region of human COX-2
<b>Cross Reactivity:</b>	(-) COX-1
<b>Species Reactivity:</b>	(+) Human, mouse, ovine, and rat; other species not tested
<b>Uniprot No.:</b>	P35354
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥3 years
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Host:</b>	Goat
<b>Applications:</b>	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:80 for IHC and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



**Lane 1:** COX-1 (human) Whole Cell Lysate (25 µg)  
**Lane 2:** COX-2 (ovine) Recombinant Protein (0.1 µg)  
**Lane 3:** COX-2 (human) Recombinant Protein (0.1 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human kidney tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Goat Anti-COX-2 (human) Affinity-Purified Polyclonal Antibody (Item No. 100034) at a 1:80 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

**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 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.<sup>1,2</sup> The COX component converts arachidonic acid to the hydroperoxy 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). 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.<sup>3,4</sup> Thus, COX-2 has been the focus of attention for nonsteroidal anti-inflammatory drug (NSAID) development. Cayman's Goat Anti-COX-2 (human) Affinity-Purified Polyclonal Antibody can be used for immunohistochemistry (IHC) 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, ovine, and rat samples.

## References

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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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