

PRODUCT INFORMATION

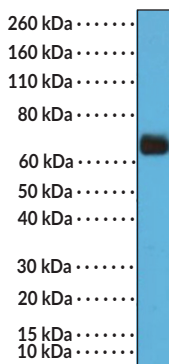
COX-2 Rabbit Monoclonal Antibody (Clone RM348)

Item No. 42827

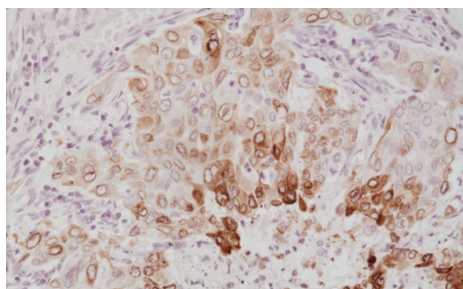
Overview and Properties

Contents:	This vial contains 100 µl of protein A affinity-purified monoclonal antibody
Synonyms:	Cyclooxygenase 2, PGHS-2, Prostaglandin H Synthase 2
Immunogen:	A peptide corresponding to the C-terminus of human COX-2
Cross Reactivity:	(+) COX-2
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM348
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:500-1:1,000 for IHC and 1:1,000-1:20,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of HeLa cell lysate using COX-2 Rabbit Monoclonal Antibody (Clone RM348) at a dilution of 1:20,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human lung cancer tissue using COX-2 Rabbit Monoclonal Antibody (Clone RM348) at a 1:1,000 dilution.

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 (Item Nos. 90010 | 90010.1 | 10006607) 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 non-steroidal anti-inflammatory drug (NSAID) development. Cayman's COX-2 Rabbit Monoclonal Antibody (Clone RM348) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

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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