PRODUCT INFORMATION

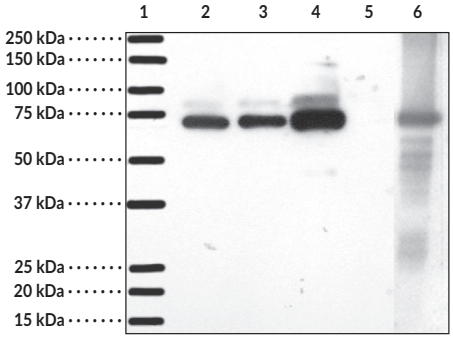
COX-2 (mouse) Polyclonal Antiserum

Item No. 160116

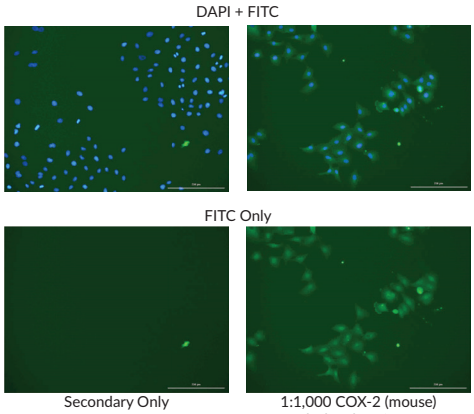
Overview and Properties

Contents: This vial contains 100 µl of lyophilized antiserum.
Synonyms: Cyclooxygenase 2, Prostaglandin H Synthase 2 (PGHS-2)
Immunogen: Peptide from the C-terminal region of mouse COX-2
Cross Reactivity: (+) COX-2; (-) COX-1
Species Reactivity: (+) Human, mouse, ovine; other species not tested
Uniprot No.: Q05769
Form: Solid
Storage: -20°C (as supplied)
Stability: ≥3 years
Storage Buffer: Polyclonal antiserum when reconstituted in 100 µl of double distilled water
Host: Rabbit
Applications: Immunofluorescence (IF), immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:300 and 1:1,000 for IF and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Precision Plus Protein Standard
Lane 2: COX-2 (ovine) (0.05 µg)
Lane 3: COX-2 (ovine) (0.1 µg)
Lane 4: COX-2 (human recombinant) (5 µg)
Lane 5: COX-1 (ovine) (0.1 µg)
Lane 6: RAW264.7 microsomes (40 µg)



Secondary Only

1:1,000 COX-2 (mouse) Polyclonal Antiserum (Item No. 160116)

Immunofluorescence analysis of paraformaldehyde-fixed, A549 cells. After incubation with 1:1,000 COX-2 (mouse) Polyclonal Antiserum (Item No. 160116), at a 1:1,000 dilution (or negative control) cells were incubated with Goat Anti-Rabbit IgG FITC (Item No. 10006588), followed by DAPI nuclear stain. Images show FITC alone or both fluorescence channels to highlight nuclear staining (where applicable).

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 G_2 (PGG_2; Item No. 17010), and the peroxidase component reduces the endoperoxide to the corresponding alcohol PGH_2 (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 Antiserum can be used for immunofluorescence (IF), immunohistochemistry (IHC), and Western blot (WB) applications. The antiserum recognizes a unique C-terminal region of COX-2 that is not present in COX-1, specifically detecting COX-2 at 70 kDa from human, mouse, and ovine 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)**, 108-25 (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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