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COX2 Monoclonal Antibody (AS73)

Catalog Number **MA1-12236**

Product data sheet

Details	
Size	100 µg
Host/Isotope	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	AS73
Immunogen	Human Cycloxygenase 2
Conjugate	Unconjugated
Form	Liquid
Concentration	1 mg/mL
Storage Conditions	-20° C, Avoid Freeze/Thaw Cycles

Species Reactivity	
Species reactivity	Human, Rat

Tested Applications	Dilution *
Western Blot (WB)	Assay-dependent

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

This antibody does not cross-react with human COX1.

Background/Target Information

COX2 converts arachidonate to prostaglandin H2 (PGH2), a committed step in prostanoid synthesis, including production of inflammatory prostaglandins. The conversion of arachidonate to prostaglandin H2 is a 2 step reaction: a cyclooxygenase (COX) reaction which converts arachidonate to prostaglandin G2 (PGG2) and a peroxidase reaction in which PGG2 is reduced to prostaglandin H2 (PGH2). It is constitutively expressed in some tissues in physiological conditions, such as the endothelium, kidney and brain, and is up-regulated under pathological conditions, such as in cancer and inflammation (in contrast to the iso-enzyme PTGS1, which is expressed ubiquitously). Up-regulation of COX2 is also associated with increased cell adhesion, phenotypic changes, resistance to apoptosis and tumor angiogenesis. In cancer cells, COX2 is a key step in the production of prostaglandin E2 (PGE2), which plays important roles in modulating motility, proliferation and resistance to apoptosis. COX2 is naturally inhibited by calcitriol (the active form of Vitamin D). Glucocorticoids chronically trans-repress PTGS2 gene activity in vivo in part by interfering with transcription initiation and elongation. COX2 is a target of NSAID such as aspirin, which can reduce pain and swelling from inflammation driven by COX2.

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