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ProductInformation

MONOCLONAL ANTI-COX-II (CYCLOOXGENASE II)
CLONE AS66
Purified Mouse Immunoglobulin

Product Number **C 9354**

Product Description

Monoclonal anti-COX-II (Cyclooxygenase II) (mouse IgG1 isotype) is produced by immunizing mice with purified recombinant human full length COX-II. The antibody is purified from ascites fluid using protein A affinity chromatography.

Monoclonal anti-COX-II (Cyclooxygenase II) recognizes human COX-II by immunoblotting, ELISA, and flow cytometry.

Cyclooxygenase (COX), also known as prostaglandin H2 synthese and prostaglandin endoperoxide synthase, is an important enzyme in the conversion of arachidonic acid to prostaglandin H2.[1, 2] Prostaglandin H2 is converted by other enzymes into inflammatory mediators such as prostaglandin (PG) D2, PGE2, PGF2a, PG12, and thromboxane A2. Thus, COX is a key enzyme in the production of inflammatory agents and is the target of intense research and drug discovery activities. COX consists of two isoforms, COX-I (599 amino acid residues) and COX-II (604 amino acid residues). The COX enzymes, membrane-associated heme proteins that have cyclooxygenase and peroxidase activities, are targets of NSAID (non-steroidal anti-inflammatory drugs) such as aspirin.[3]

COX-II is induced by a wide variety of stimuli. It is induced in migratory cells responding to pro-inflammatory stimuli and is considered to be an important mediator of inflammation.[4, 5] The pain and swelling from inflammation is largely due to the action of prostaglandins produced by COX-II. In bacterial infections, lipopolysaccharides induce COX-II. Elevated levels of COX-II are found in synoviocytes from rheumatoid arthritis patients. COX-II is also markedly expressed in 85% to 90% of human colorectal adenocarcinomas, while COX-I levels appear unchanged.[6, 7] COX-II may be involved in angiogenesis. New angiogenic endothelial cells express COX-II, while normal blood vessels express COX-I.

Reagent

Monoclonal anti-COX-II (Cyclooxygenase II) is supplied as approximately 1 mg/ml of purified antibody in phosphate buffered saline, pH 7.4, containing 0.08% sodium azide.

Storage/Stability

Store at –20 °C.

Freeze in working aliquots. Avoid repeated freezing and thawing. Do not store in a frost free freezer. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Product Profile

By immunoblotting, a working concentration of 1 to 5 µg/ml antibody is recommended. A band of approximately 72 kDa is detected.[8, 9]

In flow cytometry, a working concentration of 1 µg/test (10^6 peripheral blood mononuclear cells (PBMC) in 100 µl phosphate buffered saline or 100 µl of whole blood) is recommended.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentrations by titration test.

References

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