

Product Information

MONOCLONAL ANTI-COX-I (CYCLOOXYGENASE I)

CLONE AS70

Purified Mouse Immunoglobulin

Product Number **C9229**

Product Description

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

Monoclonal anti-COX-I (Cyclooxygenase I) recognizes human COX-I by immunoblotting and ELISA.

Cyclooxygenase (COX), also known as prostaglandin H2 synthase 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-I is involved in the regulation of homeostatic functions throughout the body, such as vascular hemostasis, renal blood flow, and maintenance of glomerular function.^{4, 5, 6} It is constitutively produced in most cell types with high expression levels found in gastrointestinal tissues. COX-I is important in the gut for the production of prostaglandins, which inhibit gastric secretion. COX-I can be induced in monocytes, macrophages, and other cells as part of the inflammatory response by IL-1 β and other cytokines. It is also induced by growth factors such as EGF and PDGF. Expression is inhibited by glucocorticosteroids such as cortisol and dexamethasone.

Reagent

Monoclonal anti-COX-I (Cyclooxygenase I) is supplied as 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 at -20 °C. 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 band of approximately 70 kDa is detected.^{4, 5}

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

References

1. Vane, J.R., and Botting, R.M., *Inflamm. Res.*, **44**, 1 (1995).
2. Smith, W.L., et al., In: *Intracellular Messengers*. Taylor, C.W. ed., London, Pergamon Press, p. 101 (1993).
3. O'Neill, G.P., et al., *Mol. Pharm.*, **45**, 245 (1994).
4. Langenbach, R., et al., *Cell*, **83**, 483 (1995).
5. O'Neill, P.O., and Ford-Hutchinson, A.W., *FEBS Letts.*, **330**, 156 (1993).
6. Mene, P., et al., *Physiol. Rev.*, **69**, 1347 (1989).

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