



Antibody Specification Sheet

Anti-human Cyclooxygenase 2 - Purified (Prostaglandin H2 synthase, Prostaglandin Endoperoxide Synthase)



Catalog reference: AS67-P

Size: 0.1mg

Antibody Information:

Antigen: human (h)
Cyclooxygenase 2 (COX 2).

Ig Class: mlgG1, Kappa.

Form: purified.

Specificity: raised to human recombinant COX 2. Zero percent cross-reactivity to human recombinant COX1 by ELISA.

Antibody Source: mono-clonal antibody from BALB/c-derived hybridoma AS67.

Production: *in vitro* cell culture.

Purification: Protein A agarose chromatography.

Purity: ≥95%.

Formulation: provided as a 0.2 µm sterile-filtered solution

in Ca⁺⁺ & Mg⁺⁺ free Dulbecco's PBS with 0.05% sodium azide.

Concentration: 1 mg/ml.

Recommendations: ELISA, Flow Cytometry.

Storage conditions: store undiluted at 4 °C or in aliquots at ≤ - 20 °C.

Applications:

Elisa: This antibody has been used to detect COX2 coated on ELISA wells with a sensitivity less than 1 ng/ml in the coating solution.

Flow Cytometry: This antibody has been used at 0.1-0.5 µg/ml to recognize COX2 expressed in permeabilized LPS-stimulated human monocytes.

General Information:

Cyclooxygenase (COX), also known as Prostaglandin H2 synthase and Prostaglandin endoperoxide synthase, is a key enzyme in the conversion arachidonic acid to Prostaglandin H2. Prostaglandin H2 is converted by other enzymes into inflammatory mediators prostaglandin (PG) D2, PGE2, PGF2a, PGI2 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. There are two enzymes of COX, COX-1 and COX-2. COX-1 is constitutively produced in many (most) cell types. It is important in the gut for the production of prostaglandins, which inhibit gastric secretion. COX-2 is an inducible enzyme and a different gene product. It can be induced in monocytes, macrophages and other cells. It is induced as part of the inflammatory response by IL-1beta and other cytokines. It is induced by growth factors such as EGF and PDGF. Expression is inhibited by glucocorticosteroids such as cortisol and dexamethasone. Lipopolysaccharide in bacterial infections induces COX-2. COX-2 is also found in elevated levels in synoviocytes from rheumatoid arthritis patients. The discomforts of inflammation such as pain and swelling are largely due to the action of prostaglandins produced by COX-2.

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Antibody Solutions

1206 Charleston Road, Mountain View, CA 94043, USA

Tel: 650-938-4300, FAX: 650-938-4390

E-mail: solns@antibody.com