ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

CYCLOOXYGENASE-1 (PGHS-1; PHS-1; Prostaglandin-endoperoxide synthase-1; COX-1)

Cat. COX14-M **Mouse** Monoclonal Anti-Ovine COX-1 protein IgG # 4 **SIZE**: 100 ug

Prostaglandins are important regulators of immune responses, fever, and pain. Two isoforms of Prostaglandin H synthase are well characterized, namely COX1 (also called PGHS-1; PHS-1; Prostaglandin-endoperoxide synthase-1) and COX2 (also called PGHS-2; Prostaglandin-endoproxide synthase-2 and PHSII). Both forms of COX proteins are membrane associated heme proteins containing Cyclooxygenase and peroxidase activities. These enzymes are targets of NSAID (Non steroidal anti-inflammatory drugs) such as aspirin. Cox-1 (human 599 aa; rat 602 aa) is homodimer of 70KD subunits (1). COX1 is constitutively expressed although significant enhancement of COX1 expression can be induced in some cell types. High expression is observed in gastrointestinal tissues.

COX-1 may play an important role in regulating or promoting cell proliferation in some normal and nepotistic cells. It catalyzes arachidonate + AH(2) + 2 O(2) = PROSTAGLANDIN H2 + A + H(2)O. This enzyme acts both as a dioxygenase and as a peroxidase. It acts as the first step in the formation of Prostaglandins and thromboxanes. Cox-1 contains 1 EGF-like domain.

Source of Antigen and Antibodies

Antigen	Highly purified ovine Cox-1 protein
Ab Host/type	Balb/c **mouse**. Splenocytes were fused with Sp2/0 myeloma cells. Resulting clone (designated COX14, isotype IgG2b), selected for reactivity with cox1, was expanded into mice as **ascites**. Antibody has been purified by Protein A/G column chromatography.
2-Ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available))
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution 50 ug/50 ul lyophilized powder

Buffer: 100 mM Tris, pH 7.5, 0.05% sodium azide

Reconstitute powder in PBS at 1 mg/ml

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for lyophilized items.

Recommended Usage

Western Blotting (1:200-1:2000 using Chemiluminescence technique). COX14-M detected ~70 kDa band in uninduced NIH/3T3 and other cells.

ELISA (1:10K-1:30K).

Histochemistry & Immunofluorescence: not tested. We recommend the use of antibody at 5-10 ug/ml.

Specificity & Cross-reactivity

COX14-M reacts with ovine, bovine, human, mouse, and rat Cox-1. Other species not tested. No significant reactivity is seen with mouse, rat, and human Cox-2. Ovine and human Cox-1 protein controls are available for antibody crossreactivity purpose.

General References:

DeWitt, D. L.. et al (1990) J. Biol. Chem. 265, 5192-5198; Diaz A et al (1992) J. Biol. Chem. 267, 10816
Morham SG et al (1995) Cell 83, 473-482; Langerbach R et al (1995) Cell 83, 483-492; Tsuji M et al (1995) Cell 83, 493-501; O'Neil PO et al (1993) FEBS Lett. 330, 156-160

*This Product is for *in vitro* research use only.

Related materials available from ADI

Western Blot recycling kit (Use the same blot to probe with multiple antibodies COX11, COX21, etc.) **recycle blot at room temp in 5-10 min**; No mercaptoethanol or heating required).

COX14-M 71217A

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