ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

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

COX11-A	Rabbit Anti-ram COX1 IgG	**SIZE**: 100 ul
COX11-C	Ram COX1 protein WB Positive Control	**SIZE**: 100 ul

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-endoperoxide 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. COX1 is composed of 70KD subunits and is constitutively expressed (1.). High expression is observed in gastrointestinal tissues. COX2 is a 72KD protein having 60% homology to COX1 (2.). Inhibition of cyclooxygenase activity is associated with anti-inflammatory activity of aspirin, indomethacin, ibuprofen, piroxicam, and other nonsteroidal anti-inflammatory drugs (NSAIDs). The peroxidase activity of PGHS may help in controlling peroxide tone and catalyze the oxidation of a variety of compounds. Therefore regulation of PGHS activity is clinically very important. Cox-1 is induced by cytokines and mitogens and is likely to play a role in inflammatory diseases such as rheumatoid arthritis. It contains one EGF-like domain.

Source of Antigen and Antibodies

Antigen	**purified COX1** prepared from **ram seminal vesicles**
Ab Host/type	Rabbit, Polyclonal IgG, purified over antigen-agarose (Cat # COX11-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

For Western blot +ve control (**Cat # COX11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **COX11-C** for good visibility with antibody Cat # **COX11-A**. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **COX11-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

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 powder.

Recommended Usage

Western Blotting (1:1K-5K for neat serum using Chemiluminescence technique).

ELISA (1:10K-1:30K) using 50-100 ng antigen/well.

Histochemistry & Immunofluorescence: Not tested. We recommend the use of antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

The COX11 antibody reacts with sheep/ram PGHS-1 mouse, rat and human COX1. Antibody cross-reactivity in various species is not established. Antibodies do not cross-react with COX2. COX11-C protein control can be used to optimize test conditions and test antibodies.

General References:

DeWitt, D. L.. et al (1990) *J. Biol. Chem.* **265**, 5192-5198.

2. Citations of for ADI Antibodies (see updates at the web site)

Yan H, 2003, J. Lipid Res., 44: 424 - 429., ,
Castle PE, 2003, Cancer Epidemiol. Biomarkers Prev., 12: 1449 - 1456, WB,

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

Related materials available from ADI

Anti-Cox-1 and Cox-2

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).

COX11-A-C 71217A

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