SANTA CRUZ BIOTECHNOLOGY, INC.

# Cox-1 (11): sc-19998

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Prostaglandins are a diverse group of autocrine and paracrine hormones that mediate many cellular and physiologic processes. Prostaglandin H2 (PGH2) is an intermediate molecule in formation of the prostaglandins. Cyclooxygenase-1 (Cox-1) and cyclooxygenase-2 (Cox-2) are prostaglandin synthases that catalyze the formation of PGH2 from arachidonic acid (AA). Cox-1 and Cox-2 are isozymes of prostaglandin-endoperoxidase synthase (PTGS). Cox-1 is constitutively expressed in most tissues and is thought to serve in general "housekeeping" functions. Cox-2 is efficiently induced in migratory cells responding to pro-inflammatory stimuli and is considered to be an important mediator of inflammation. Both enzymes are targets for the nonsteroidal therapeutic anti-inflammatory drugs, NSAIDs.

## CHROMOSOMAL LOCATION

Genetic locus: PTGS1 (human) mapping to 9q33.2; Ptgs1 (mouse) mapping to 2 B.

## SOURCE

Cox-1 (11) is a mouse monoclonal antibody raised against Cox-1 purified from seminal vesicles of ovine origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2b}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cox-1 (11) is available conjugated to agarose (sc-19998 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19998 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19998 PE), fluorescein (sc-19998 FITC), Alexa Fluor® 488 (sc-19998 AF488), Alexa Fluor® 546 (sc-19998 AF546), Alexa Fluor® 594 (sc-19998 AF594) or Alexa Fluor® 647 (sc-19998 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19998 AF680) or Alexa Fluor® 790 (sc-19998 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Cox-1 (11) is recommended for detection of Cyclooxygenase-1 of mouse, rat, human and ovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x $10^6$ cells); may cross-reactive with human recombinant, human platelet, rat and mouse Cox-1 and slightly (5%) with ovine Cox-2; no cross-reaction with human or mouse Cox-2.

Suitable for use as control antibody for Cox-1 siRNA (h): sc-29277, Cox-1 siRNA (m): sc-35097, Cox-1 shRNA Plasmid (h): sc-29277-SH, Cox-1 shRNA Plasmid (m): sc-35097-SH, Cox-1 shRNA (h) Lentiviral Particles: sc-29277-V and Cox-1 shRNA (m) Lentiviral Particles: sc-35097-V.

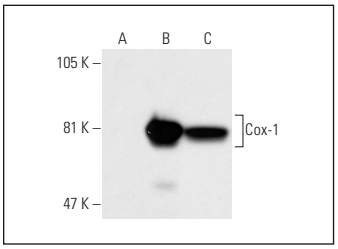
Molecular Weight of Cox-1: 72 kDa.

Positive Controls: Cox-1 (h): 293T Lysate: sc-114480, NIH/3T3 whole cell lysate: sc-2210 or U-937 cell lysate: sc-2239.

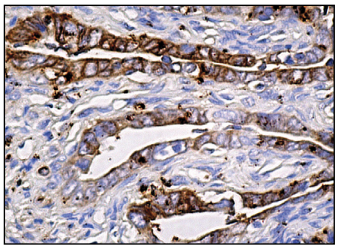
## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA




Cox-1 (11): sc-19998. Western blot analysis of Cox-1 expression in non-transfected 293T: sc-117752 (**A**), human Cox-1 transfected 293T: sc-114480 (**B**) and U-937 (**C**) whole cell lysates.



Cox-1 (11): sc-19998. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS


1. Su, J.L., et al. 2004. Cyclooxygenase-2 induces EP1- and HER-2/neu-dependent vascular endothelial growth factor-C up-regulation: a novel mechanism of lymphangiogenesis in lung adenocarcinoma. Cancer Res. 64: 554-564.
2. Restrepo, B., et al. 2011. Participation of cyclooxygenase pathway in the vasoconstriction induced by 5-HT in the *in situ* autoperfused kidney of long-term diabetic rats. Eur. J. Pharmacol. 659: 37-44.
3. Scoditti, E., et al. 2012. Mediterranean diet polyphenols reduce inflammatory angiogenesis through MMP-9 and Cox-2 inhibition in human vascular endothelial cells: a potentially protective mechanism in atherosclerotic vascular disease and cancer. Arch. Biochem. Biophys. 527: 81-89.
4. Pan, H.C., et al. 2013. Reciprocal modulation of C/EBP-α and C/EBP-β by IL-13 in activated microglia prevents neuronal death. Eur. J. Immunol. 43: 2854-2865.
5. Bestard-Escalas, J., et al. 2016. Lipid fingerprint image accurately conveys human colon cell pathophysiologic state: a solid candidate as biomarker. Biochim. Biophys. Acta 1861: 1942-1950.
6. Pérez-Cremades, D., et al. 2017. Extracellular histones disarrange vasoactive mediators release through a COX-NOS interaction in human endothelial cells. J. Cell. Mol. Med. 21: 1584-1592.
7. Yang, L., et al. 2018. Expression profiles of interferon-stimulated gene 15 and prostaglandin synthases in the ovine lymph nodes during early pregnancy. Mol. Reprod. Dev. 86: 100-108.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.