SANTA CRUZ BIOTECHNOLOGY, INC.

Cox-1 (C-20): sc-1752

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 H_2 (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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cox-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1752 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-1752 PE, 100 tests; and as agarose conjugate for immunoprecipitation, sc-1752 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Cox-1 (C-20) is recommended for detection of cyclooxygenase-1 of human and, to a lesser extent, mouse and rat 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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: CCD-1064Sk cell lysate: sc-2263, human platelet whole cell lysate: sc-363773 or U-937 cell lysate: sc-2239.

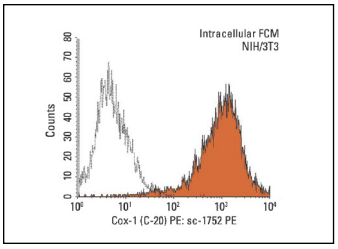
STORAGE

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

RESEARCH USE

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

DATA



Cox-1 (C-20) PE: sc-1752 PE. Intracellular FCM analysis of fixed and permeabilized NIH/3T3 cells. Black line histogram represents the isotype control, normal goat IgG: sc-3992.

SELECT PRODUCT CITATIONS

1. Komhoff, M., et al. 2000. Enhanced expression of cyclooxygenase-2 in high grade human transitional cell bladder carcinomas. Am. J. Pathol. 157: 29-35.
2. Chen, C.C., et al. 2000. TNFα-induced cyclooxygenase-2 expression in human lung epithelial cells: involvement of the phospholipase C γ2, protein kinase C α, tyrosine kinase, NFκB-inducing kinase, and IκB kinase 1/2 pathway. J. Immunol. 165: 2719-2728.
3. Vinukonda, G., et al. 2010. Neuroprotection in a rabbit model of intraventricular haemorrhage by cyclooxygenase-2, prostanoid receptor-1 or tumour necrosis factor-α inhibition. Brain 133: 2264-2280.
4. de Seranno, S., et al. 2010. Role of estradiol in the dynamic control of tanycyte plasticity mediated by vascular endothelial cells in the median eminence. Endocrinology 151: 1760-1772.
5. Orido, T., et al. 2010. Decrease in uptake of arachidonic acid by indomethacin in LS174T human colon cancer cells; a novel cyclooxygenase-2-inhibition-independent effect. Arch. Biochem. Biophys. 494: 78-85.
6. Jiménez, P., et al. 2010. Prostaglandin EP2 receptor expression is increased in Barrett's oesophagus and oesophageal adenocarcinoma. Aliment. Pharmacol. Ther. 31: 440-451.
7. Mastronardi, M.L., et al. 2011. Circulating microparticles from septic shock patients exert differential tissue expression of enzymes related to inflammation and oxidative stress. Crit. Care Med. 39: 1739-1748.
8. Garcia-Garcia, F.J., et al. 2012. Signal transduction pathways (MAPKs, NFκB, and C/EBP) regulating COX-2 expression in nasal fibroblasts from asthma patients with aspirin intolerance. PLoS ONE 7: e51281.