SANTA CRUZ BIOTECHNOLOGY, INC.

Cox-2 (H-3): sc-376861

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: PTGS2 (human) mapping to 1q31.1; Ptgs2 (mouse) mapping to 1 G1.

SOURCE

Cox-2 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 17-55 near the N-terminus of Cox-2 of rat origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cox-2 (H-3) is available conjugated to agarose (sc-376861 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376861 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-376861 PE), fluorescein (sc-376861 FITC) or Alexa Fluor® 488 (sc-376861 AF488) or Alexa Fluor® 647 (sc-376861 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-376861 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Cox-2 (H-3) is recommended for detection of Cox-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Cox-2 siRNA (h): sc-29279, Cox-2 siRNA (m): sc-29278, Cox-2 siRNA (r): sc-270376, Cox-2 shRNA Plasmid (h): sc-29279-SH, Cox-2 shRNA Plasmid (m): sc-29278-SH, Cox-2 shRNA Plasmid (r): sc-270376-SH, Cox-2 shRNA (h) Lentiviral Particles: sc-29279-V, Cox-2 shRNA (m) Lentiviral Particles: sc-29278-V and Cox-2 shRNA (r) Lentiviral Particles: sc-270376-V.

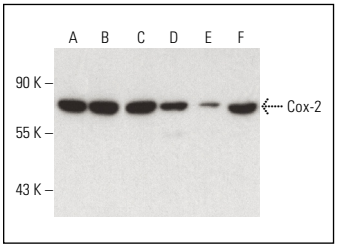
Molecular Weight of Cox-2: 70-72 kDa.

Positive Controls: J774.A1 cell lysate: sc-3802, M1 whole cell lysate: sc-364782 or Jurkat whole cell lysate: sc-2204.

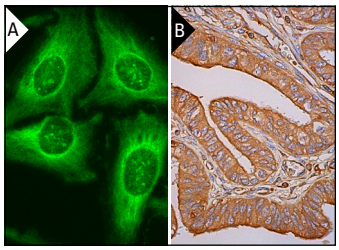
STORAGE

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

DATA



Cox-2 (H-3): sc-376861. Western blot analysis of Cox-2 expression in SUP-T1 (**A**), Jurkat (**B**), J774.A1 (**C**), M1 (**D**), TK-1 (**E**) and RAW 264.7 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Cox-2 (H-3): sc-376861. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Chang, Y.Y., et al. 2013. Hepatoprotection of noni juice against chronic alcohol consumption: lipid homeostasis, antioxidation, alcohol clearance, and anti-inflammation. J. Agric. Food Chem. 61: 11016-11024.
2. Jia, Z. and He, J. 2016. Paeoniflorin ameliorates rheumatoid arthritis in rat models through oxidative stress, inflammation and cyclooxygenase 2. Exp. Ther. Med. 11: 655-659.
3. Maayah, Z.H., et al. 2017. The role of cytochrome P450 1B1 and its associated mid-chain hydroxyeicosatetraenoic acid metabolites in the development of cardiac hypertrophy induced by isoproterenol. Mol. Cell. Biochem. 429: 151-165.
4. Quintero-García, M., et al. 2018. Iodine prevents the increase of testosterone-induced oxidative stress in a model of rat prostatic hyperplasia. Free Radic. Biol. Med. 115: 298-308.
5. Mattos, R.M., et al. 2019. Galectin-3 plays an important role in endometriosis development and is a target to endometriosis treatment. Mol. Cell. Endocrinol. 486: 1-10.
6. Seo, K.H., et al. 2020. Anti-inflammatory role of *Prunus persica L.* Batsch methanol extract on lipopolysaccharide-stimulated glial cells. Mol. Med. Rep. 21: 2030-2040.
7. Casili, G., et al. 2021. The protective role of prolyl oligopeptidase (POP) inhibition in acute lung injury induced by intestinal ischemia-reperfusion. Oncotarget 12: 1663-1676.
8. Anchi, P., et al. 2022. Co-treatment of Nimbolide augmented the anti-arthritic effects of methotrexate while protecting against organ toxicities. Life Sci. 295: 120372.

RESEARCH USE

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