

Cox-2 (H-62): sc-7951

BACKGROUND

Prostaglandins are a diverse group of autocrine and paracrine hormones that mediate many cellular and physiologic processes. Prostaglandin H₂ (PGH₂) is an intermediate in formation of the prostaglandins. Two prostaglandin synthases that catalyze the formation of PGH₂ from arachidonic acid (AA) are cyclooxygenase-1 and cyclooxygenase-2. Cyclooxygenase-2, or Cox-2, is efficiently induced in migratory cells responding to pro-inflammatory stimuli and is considered to be an important mediator of inflammation. An alternative form of the protein, designated Cox-1, is constitutively expressed in most tissues and is thought to serve in general "housekeeping" functions. 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-62) is a rabbit polyclonal antibody raised against amino acids 50-111 of Cox-2 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.

Available as phycoerythrin conjugate for flow cytometry, sc-7951 PE, 100 tests.

APPLICATIONS

Cox-2 (H-62) is recommended for detection of Cox-2 of mouse, rat and human 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 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cox-2 (H-62) is also recommended for detection of Cox-2 in additional species, including equine, canine, bovine and porcine.

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

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

Positive Controls: A549 cell lysate: sc-2413, CCD-1064Sk cell lysate: sc-2263 or RAW 264.7 + LPS/PMA cell lysate: sc-2212.

RESEARCH USE

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

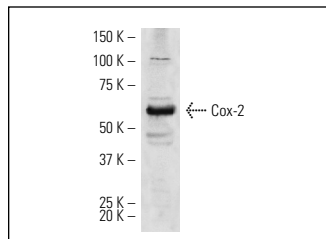
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

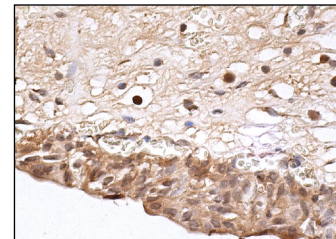
STORAGE

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-62): sc-7951. Western blot analysis of Cox-2 expression in PMA + LPS induced RAW 264.7 whole cell lysate.



Cox-2 (H-62): sc-7951. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and nuclear staining of urothelial cells.

SELECT PRODUCT CITATIONS

- Banerjee, S., et al. 2002. Suppression of 7,12-dimethylbenz(a)anthracene-induced mammary carcinogenesis in rats by resveratrol: role of nuclear factor-κB, cyclooxygenase 2, and matrix metalloprotease 9. *Cancer Res.* 62: 4945-4954.
- Huang, C.Y., et al. 2011. Nephroblastoma overexpressed gene (NOV) enhances cell motility and COX-2 upregulation of human osteosarcoma involves αvβ5 integrin, ILK and AP-1-dependent pathways. *Biochem. Pharmacol.* 81: 577-585.
- Kumar, A., et al. 2011. JSH-23 targets nuclear factor κ B (NFκB) and reverses various deficits in experimental diabetic neuropathy: effect on neuroinflammation and antioxidant defence. *Diabetes Obes. Metab.* 13: 750-758.
- Hafeez, B.B., et al. 2011. Genetic ablation of PKC ε inhibits prostate cancer development and metastasis in transgenic mouse model of prostate adenocarcinoma. *Cancer Res.* 71: 2318-2327.
- Chakraborty, P., et al. 2011. Amelioration of cisplatin-induced nephrotoxicity in mice by oral administration of diphenylmethyl selenocyanate. *Free Radic. Res.* 45: 177-187.
- Lappas, M., et al. 2012. Complement C5A regulates proinflammatory mediators in human placenta. *Biol. Reprod.* 86: 190.
- Peters, S., et al. 2012. Chronic psychosocial stress increases the risk for inflammation-related colon carcinogenesis in male mice. *Stress* 15: 403-415.



Try **Cox-2 (H-3): sc-376861** or **Cox-2 (D-12): sc-166475**, our highly recommended monoclonal alternatives to Cox-2 (H-62). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Cox-2 (H-3): sc-376861**.