

## Cox-2 (C-20): sc-1745

### BACKGROUND

Prostaglandins are a diverse group of autocrine and paracrine hormones that mediate many cellular and physiologic processes. Prostaglandin H<sub>2</sub> (PGH<sub>2</sub>) is an intermediate in formation of the prostaglandins. Two prostaglandin synthases that catalyze the formation of PGH<sub>2</sub> 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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-1745 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as PE conjugate for flow cytometry, sc-1745 PE, 100 tests; as agarose conjugate for immunoprecipitation, sc-1745 AC, 500 µg/0.25 ml agarose in 1 ml; and as either fluorescein (sc-1745 FITC) or rhodamine (sc-1745 TRITC) conjugates for immunofluorescence, 200 µg/1 ml.

### APPLICATIONS

Cox-2 (C-20) is recommended for detection of cyclooxygenase-2 (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 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cox-2 (C-20) is also recommended for detection of cyclooxygenase-2 (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, Cox-2 shRNA (m) Lentiviral Particles: sc-29278-V Lentiviral Particles: sc-44256-V.

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

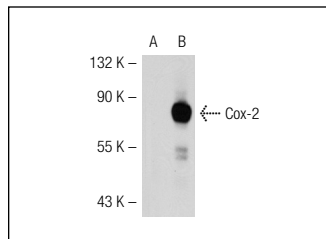
### RESEARCH USE

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

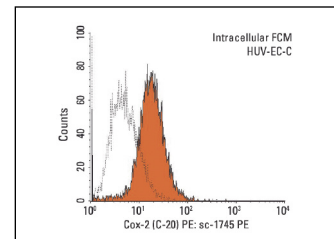
### STORAGE

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

### DATA



Cox-2 (C-20): sc-1745. Western blot analysis of Cox-2 expression in non-transfected: sc-110760 (A) and human Cox-2 transfected: sc-113099 (B) 293 whole cell lysates.



Cox-2 (C-20) PE: sc-1745 PE. Intracellular FCM analysis of fixed and permeabilized HUV-EC-C cells. Black line histogram represents the isotype control, normal goat IgG: sc-3992.

### SELECT PRODUCT CITATIONS

- Neufang, G., et al. 2001. Abnormal differentiation of epidermis in transgenic mice constitutively expressing cyclooxygenase-2 in skin. *Proc. Natl. Acad. Sci. USA* 98: 7629-7634.
- Hsu, Y.W., et al. 2001. Ceramide inhibits lipopolysaccharide-mediated nitric oxide synthase and cyclooxygenase-2 induction in macrophages: effects on protein kinases and transcription factors. *J. Immunol.* 166: 5388-5397.
- Wu, F., et al. 2011. Inhibitory effects of honokiol on lipopolysaccharide-induced cellular responses and signaling events in human renal mesangial cells. *Eur. J. Pharmacol.* 654: 117-121.
- Giannarelli, C., et al. 2012. Synergistic effect of liver X receptor activation and simvastatin on plaque regression and stabilization: an magnetic resonance imaging study in a model of advanced atherosclerosis. *Eur. Heart J.* 33: 264-273.
- Chang, H.H., et al. 2012. Effect of triethylene glycol dimethacrylate on the cytotoxicity, cyclooxygenase-2 expression and prostanoids production in human dental pulp cells. *Int. Endod. J.* 45: 848-858.
- Puig, K.L., et al. 2012. Amyloid precursor protein and proinflammatory changes are regulated in brain and adipose tissue in a murine model of high fat diet-induced obesity. *PLoS ONE* 7: e30378.
- 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.

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Try **Cox-2 (H-3): sc-376861** or **Cox-2 (D-12): sc-166475**, our highly recommended monoclonal alternatives to Cox-2 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Cox-2 (H-3): sc-376861**.