

Cox-1 (6D317): sc-70877

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 "house-keeping" 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; Ptg1 (mouse) mapping to 2 B.

SOURCE

Cox-1 (6D317) 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.

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.

APPLICATIONS

Cox-1 (6D317) 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 10⁶ cells); may cross-react with human recombinant, human platelet, rat and mouse Cox-1, and slightly (5%) with ovine Cox-2; non cross-reactive 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.

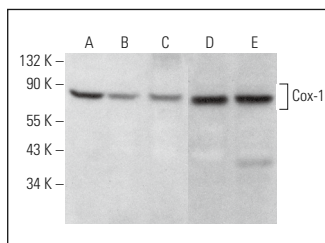
Molecular Weight of Cox-1: 72 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 whole cell lysate: sc-2210 or HUV-EC-C whole cell lysate: sc-364180.

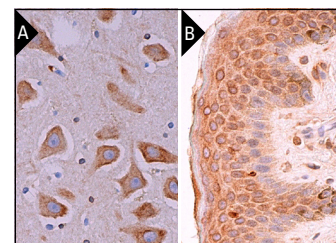
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Cox-1 (6D317): sc-70877. Western blot analysis of Cox-1 expression in NIH/3T3 (A), KNRK (B), HUV-EC-C (C), CCD-1064Sk (D) and A-431 (E) whole cell lysates.



Cox-1 (6D317): sc-70877. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes (B).

SELECT PRODUCT CITATIONS

1. Lamon, B.D., et al. 2010. Inducible nitric oxide synthase gene deletion exaggerates MAPK-mediated cyclooxygenase-2 induction by inflammatory stimuli. *Am. J. Physiol. Heart Circ. Physiol.* 299: H613-H623.

PROTOCOLS

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



See **Cox-1 (11): sc-19998** for Cox-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.