SANTA CRUZ BIOTECHNOLOGY, INC.

Cox-1 (H-1): sc-166573

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. Cyclooxygen-ase-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 (mouse) mapping to 2 B.

SOURCE

Cox-1 (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 575-602 at the C-terminus of Cox-1 of mouse 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.

Blocking peptide available for competition studies, sc-166573 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

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

Suitable for use as control antibody for Cox-1 siRNA (m): sc-35097, Cox-1 shRNA Plasmid (m): sc-35097-SH and Cox-1 shRNA (m) Lentiviral Particles: sc-35097-V.

Molecular Weight of Cox-1: 72 kDa.

Positive Controls: Cox-1 (m): 293T Lysate: sc-126660, C2C12 whole cell lysate: sc-364188 or TK-1 whole cell lysate: sc-364798.

STORAGE

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

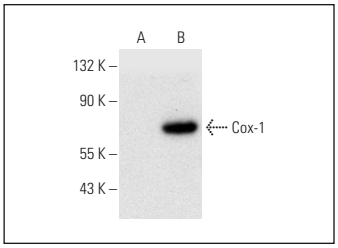
PROTOCOLS

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

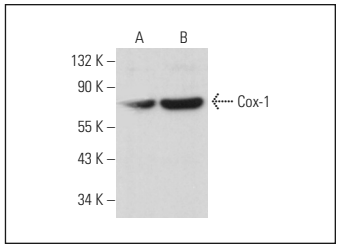
RESEARCH USE

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

DATA



Cox-1 (H-1): sc-166573. Western blot analysis of Cox-1 expression in non-transfected: sc-117752 (**A**) and mouse Cox-1 transfected: sc-126660 (**B**) 293T whole cell lysates.



Cox-1 (H-1): sc-166573. Western blot analysis of Cox-1 expression in C2C12 (**A**) and TK-1 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Simplicio, J.A., et al. 2015. Contribution of oxidative stress and prostanoids in endothelial dysfunction induced by chronic fluoxetine treatment. Vascul. Pharmacol. 73: 124-137.
2. Carda, A.P., et al. 2015. Acute restraint stress induces endothelial dysfunction: role of vasoconstrictor prostanoids and oxidative stress. Stress 18: 233-243.
3. Muniz, J.J., et al. 2015. Chronic ethanol consumption induces erectile dysfunction: role of oxidative stress. Life Sci. 141: 44-53.
4. Qin, Y., et al. 2016. Lipopolysaccharide preconditioning induces an anti-inflammatory phenotype in BV2 microglia. Cell. Mol. Neurobiol. 36: 1269-1277.
5. Diniz, M.C., et al. 2017. Mechanisms underlying sodium nitroprusside-induced tolerance in the mouse aorta: role of Ros and cyclooxygenase-derived prostanoids. Life Sci. 176: 26-34.
6. Leite, L.N., et al. 2017. Ethanol-induced erectile dysfunction and increased expression of pro-inflammatory proteins in the rat cavernosal smooth muscle are mediated by NADPH oxidase-derived reactive oxygen species. Eur. J. Pharmacol. 804: 82-93.
7. Liao, X., et al. 2017. Prokaryotic expression, purification and characterization of human cyclooxygenase-2. Int. J. Mol. Med. 40: 75-82.
8. Osborne, C., et al. 2018. The phospholipase A_2 pathway controls a synaptic cholesterol ester cycle and synapse damage. J. Cell Sci. 131 pii: jcs211789.
9. Assis, V.O., et al. 2019. Ethanol withdrawal alters the oxidative state of the heart through AT_1-dependent mechanisms. Alcohol Alcohol. pii: agz101.

CONJUGATES

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.