SANTA CRUZ BIOTECHNOLOGY, INC.

Cox-2 (50-111): sc-4483 WB

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 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.

REFERENCES

1. O'Neill, P.O. and Ford-Hutchinson, A.W. 1993. Expression of mRNA for cyclooxygenase-1 and cyclooxygenase-2 in human tissues. FEBS Lett. 330: 156-160.
2. O'Neill, G.P., Mancini, J.A., Kargman, S., Yergey, J., Kwan, M.Y., Falgueyret, J.P., Abromozitz, M., Kennedy, B.P., Ouellet, M., Cromlish, W., Culp, S., Evans, J.F., Ford-Hutchinson, A.W., and Vickers, P.J. 1994. Overexpression of human prostaglandin G/H synthase-1 and -2 by recombinant vaccinia virus: inhibition by nonsteroidal anti-inflammatory drugs and biosynthesis of 15-hydroeicosatetraenoic acid. Mol. Pharm. 45: 245-254.
3. Morham, S.G., Langenbach, R., Loftin, C.D., Tiano, H.F., Vouloumanos, N., Jennett, J.C., Mahler, J.F., Kluckman, K.D., Ledford, A., Lee, C.A., and Smithies, O. 1995. Prostaglandin synthase 2 gene disruption causes severe renal pathology in the mouse. Cell 83: 473-482.
4. Langenbach, R., Morham, S.G., Tiano, H.F., Loftin, C.D., Ghanayem, B.I., Chulada, P.C., Mahler, J.F., Lee, C.A., Goulding, E.H., Kluckman, K.D., Kim, H.S., and Smithies, O. 1995. Prostaglandin synthase 1 gene disruption in mice reduces arachidonic acid-induced inflammation and indomethacin-induced gastric ulceration. Cell 83: 483-492.
5. Tsujii, M. and DuBois, R.N. 1995. Alterations in cellular adhesion and apoptosis in epithelial cells overexpressing prostaglandin endoperoxide synthase 2. Cell 83: 493-501.
6. Adams, J., Collaco-Moraes, Y., and de Belleroche, J. 1996. Cyclooxygenase-2 induction in cerebral cortex: an intracellular response to synaptic excitation. J. Neurochem. 66: 6-13.
7. Berenbaum, F., Jacques, C., Thomas, G., Corvol, M.T., Bereziat, G., and Masliah, J. 1996. Synergistic effect of interleukin-1 β and tumor necrosis factor α on PGE2 production by articular chondrocytes does not involve PLA_2 stimulation. Exp. Cell Res. 222: 379-384.

SOURCE

Cox-2 (50-111) is expressed in *E. coli* as a 34 kDa tagged fusion protein corresponding to amino acids 50-111 of Cox-2 of human origin.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

PRODUCT

Cox-2 (50-111) is purified from bacterial lysates (>98%) by column chromatography; supplied as 10 µg protein in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

Cox-2 (50-111) is suitable as a Western blotting control for sc-7951.

RESEARCH USE

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