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 "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: PTGS2 (human) mapping to 1q31.1; Ptgs2 (mouse) mapping to 1 G1.

Source

Cox-2 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 17-55 near the N-terminus of Cox-2 of rat origin.

Product

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cox-2 (H-3) is available conjugated to agarose (sc-376861 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376861 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-376861 PE), fluorescein (sc-376861 FITC), Alexa Fluor® 488 (sc-376861 AF488) or Alexa Fluor® 647 (sc-376861 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-376861 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Applications

Cox-2 (H-3) is recommended for detection of Cox-2 of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


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

Positive Controls: J774.A1 cell lysate: sc-3802, M1 whole cell lysate: sc-364782 or SUP-T1 whole cell lysate: sc-364796.

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-3): sc-376861. Western blot analysis of Cox-2 expression in J774.A1 (A), M1 (B), TK-1 (C) and SUP-T1 (D) whole cell lysates.

Cox-2 (H-3): sc-376861. Immunofluorescence staining of methanol-fixed Hela cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (B).

Select Product Citations


Research Use

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

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