Technical Data Sheet

Purified Mouse Anti-Cox-2

Product Information

Material Number: 610203
Alternate Name: PGHS-2, Cyclooxygenase-2
Size: 50 µg
Concentration: 250 µg/ml
Clone: 33/Cox-2
Immunogen: Rat Cox-2 aa. 368-604
Isotype: Mouse IgG1
Reactivity:
   QC Testing: Mouse
   Tested in Development: Human, Chicken

Target MW: 70 kDa
Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Cyclooxygenase (Cox) is also known as prostaglandin H synthase or PGH synthase (E.C. 1.14.99.1). It catalyzes the conversion of arachidonate to prostaglandin H2 (PGH2), the precursor of PGE2, PGF2α, PGD2, prostacyclin, and thromboxane A2. Cox actually has two different enzymatic activities: a cyclooxygenase that mediates the formation of PGG2 from oxygen and arachidonate and a hydroperoxidase that catalyzes a reduction of PGG2 yielding PGH2. Two Cox genes, Cox-1 and Cox-2, have been isolated in several species. A 4kb mRNA encodes the 604 amino acid Cox-2 protein. The two human Cox isoenzymes are 61% identical in amino acid composition with the active sites being highly conserved. Cox-2 mRNA and protein levels are induced by serum, lipopolysaccharides, growth factors, human chorionic gonadotropin and phorbol esters in various mammalian cell types. It has been shown that interleukin-1α (IL-1α) induces increased levels of Cox-2 mRNA and protein in human endothelial cells. The sustained increase in Cox-2 is apparently due (at least in part) to IL-1α increasing the stability of Cox-2 mRNA. This type of regulatory mechanism may play an important role in chronic inflammatory conditions.

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

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<th>Tested During Development</th>
<th>Not Recommended</th>
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<td>Western blot</td>
<td>Routine Tested</td>
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<td>Immunofluorescence</td>
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Recommended Assay Procedure:

**Western blot:** Please refer to [http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml](http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml)

Suggested Companion Products

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<tr>
<td>611473</td>
<td>Mouse Macrophage + IFNy/LPS Lysate</td>
<td>500 µg</td>
<td>(none)</td>
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<tr>
<td>554002</td>
<td>HRP Goat Anti-Mouse Ig</td>
<td>1.0 ml</td>
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<tr>
<td>554001</td>
<td>FITC Goat Anti-Mouse Ig</td>
<td>0.5 mg</td>
<td>Polyclonal</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References


Hla T, Neilson K. Human cyclooxygenase-2 cDNA. *Proc Natl Acad Sci U S A.* 1992; 89(16):7384-7388. (Biology)

