Technical Data Sheet Biotin Mouse Anti-Cox-2

| Material Number: | 610205 | | |
|------------------|--|--|--|
| 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 ${\leq}0.09\%$ 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, PGF2 α , 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 testers in various mammalian cell types. It has been shown that interleukin-1 α (IL-1 α) 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-1 α increasing the stability of Cox-2 mRNA. This type of regulatory mechanism may play an important role in chronic inflammatory conditions.



Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20° C.

Application Notes

| Application | |
|--|---|
| Western blot | Routinely Tested |
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Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|------------------------------------|--------|--------|
| 611473 | Mouse Macrophage + IFNy/LPS Lysate | 500 μg | (none) |
| 554002 | HRP Goat Anti-Mouse Ig | 1.0 ml | (none) |

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 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.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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

Marcheselli VL, Bazan NG. Sustained induction of prostaglandin endoperoxide synthase-2 by seizures in hippocampus. Inhibition by a platelet-activating factor antagonist. J Biol Chem. 1996; 271(40):24794-24799. (Clone-specific: Western blot)

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Vane JR, Mitchell JA, Appleton I. Inducible isoforms of cyclooxygenase and nitric-oxide synthase in inflammation. Proc Natl Acad Sci U S A. 1994; 91(6):2046-2050.(Biology)

Xie QW, Cho HJ, Calaycay J, et al. Cloning and characterization of inducible nitric oxide synthase from mouse macrophages. *Science*. 1992; 256(5054):225-228. (Biology)