

Product Information



COX-2 (mouse) Blocking Peptide

Item No. 360106

Cyclooxygenase catalyzes the first step in the biosynthesis of prostaglandins, thromboxanes, and prostacyclins: the conversion of arachidonic acid to prostaglandin H₂. Recent discoveries of the induction of cyclooxygenase by a variety of stimuli such as phorbol esters, lipopolysaccharides, and cytokines led to the hypothesis that the inducible form of cyclooxygenase, COX-2, is responsible for the biosynthesis of prostaglandins under acute inflammatory conditions.^{1,2} The enzyme has been cloned from a variety of species including human, mouse, rat, and sheep.³⁻⁶ COX-2 from these species are approximately 90% identical at the amino acid level, whereas the homology between COX-1 and COX-2 is only about 60%.⁷ COX-2 appears to be localized to both the endoplasmic reticulum and nuclear envelope in mouse 3T3 cells and human and bovine endothelial cells.⁸

Laboratory Procedures

This vial contains 200 µg of lyophilized peptide derived from the mouse COX-2 sequence.³ This peptide was used as an antigen for production of Cayman's COX-2 (mouse) polyclonal antibody (Item No. 160106). This blocking peptide can be used in conjunction with Cayman's COX-2 (mouse) polyclonal antibodies (Item No. 160106, 160116, and 160126) to block antibody/protein complex formation during immunochemical analysis for COX-2.

Reconstitute the lyophilized peptide with 200 µl of PBS or distilled water. Store this peptide solution at -20°C. It will be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the COX-2 (mouse) Polyclonal Antibody (Item No. 160106 or 160126) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 20 µl of antibody and 20 µl of peptide (For use with Item No. 160116, mix at a 2:1 ratio (v:v) of peptide:antiserum).*
2. Incubate for one hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

References

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