Product Information

COX-1 (ovine) Blocking Peptide

Item No. 360108

COX-1 is responsible for the production of prostaglandins essential for the normal function of many organs including stomach and kidney.[1] Although COX-1 is generally described as constitutively expressed, this is actually an oversimplification. COX-1 expression is regulated developmentally and in response to a variety of other stimuli.[2-5] COX-1 has a molecular weight of 70,000 and is expressed in nearly all tissues in nearly all tissues of the body.[1,2,6,76]

Laboratory Procedures

This vial contains 200 µg of lyophilized peptide derived from the ovine/human COX-1 sequence.[2,6] This peptide was used as an antigen for production of Cayman's COX-1 (ovine) Polyclonal Antiserum (Item No. 160108) and can be used in conjunction with this antiserum to block antibody/protein complex formation during immunohistochemical analysis for COX-1 in ovine, human, and bovine tissues.

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-1 (ovine) Polyclonal Antibody (Item No. 160108) 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.*
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

1. Smith, W.L. and DeWitt, D.L. Prostaglandin endoperoxide H synthases-1 and -2. *Adv. Immunol.* **62**, 167-215 (1995).
2. Funk, C.D., Funk, L.B., Kennedy, M.E., *et al.* Human platelet/erythroleukemia cell prostaglandin G/H synthase: cDNA cloning, expression, and gene chromosomal assignment. *FASEB J.* **5**, 2304-2312 (1991).
3. Brannon, T.S., North, A.J., Wells, L.B., *et al.* Prostacyclin synthesis in ovine pulmonary artery is developmentally regulated by changes in cyclooxygenase-1 gene expression. *J. Clin. Invest.* **93**, 2230-2235 (1994).
4. Samet, J.M., Fasano, M.B., Fonteh, A.N., *et al.* Selective induction of prostaglandin G/H synthase I by stem cell factor and dexamethasone in mast cells. *J. Biol. Chem.* **270**, 8044-8049 (1995).
5. Hla, T. and Maciag, T. Cyclooxygenase gene expression is down-regulated by heparin-binding (acidic fibroblast) growth factor-1 in human endothelial cells. *J. Biol. Chem.* **266**, 24059-24063 (1991).
6. DeWitt, D.L. and Smith, W.L. Primary structure of prostaglandin G/H synthase from sheep vesicular gland determined from the complementary DNA sequence. *Proc. Natl. Acad. Sci. USA* **85**, 1412-1416 (1988).
7. DeWitt, D.L., El-Harith, E.A., Kraemer, S.A., *et al.* The aspirin and heme-binding sites of ovine and murine prostaglandin endoperoxide synthases. *J. Biol. Chem.* **265**, 5192-5198 (1990).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/360108

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com