

Code No. 18515

**Anti-Human
COX-2 (C295) Rabbit IgG Affinity Purify**Volume : 100 µg

Introduction : COX-1 and COX-2 (Cyclooxygenase 1,2) are also called prostaglandin endoperoxide H synthase, and are important enzymes as catalysts for the reaction in prostaglandin H₂ (PGH₂) synthesis from the arachidonic acid. COX-1 and COX-2 have the homology of about 60% at the amino acid level. COX-1 is expressed constitutively in many organs such as kidney, stomach, vascular smooth muscle or platelets widely and it is thought to play a so-called housekeeping role. On the other hand, COX-2 cannot be usually detected from organs, however, it is high-level expressed by macrophage and other cells in response to the stimulation such as various cytokines, hormones, the tumor cause medicines, inflammation mediators, or mitogens, therefore, it is thought that COX-2 produces prostaglandin in relation to the inflammation condition.

Antigen : Synthetic peptide of a part of Human COX-2

Purification : Purified with antigen peptide

Form : Lyophilized product from 1 % BSA in PBS containing 0.05 % NaN₃

How to use : 1.0 mL deionized water will be added to the product (the conc. comes up 100 µg /mL)

Stability : Lyophilized product, 5 years at 2 – 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for immunohistochemistry with formalin fixed paraffin embedded tissues after microwave treatment by several techniques such as Avidin Biotin Complex (ABC) Method. The optimal concentration is 2 - 10 µg/mL, however, the concentration should be optimized by each laboratory.
: This antibody can be used for western blotting in concentration of 2 - 5 µg /mL.

Specificity : Human COX-2 specific. Not cross-react with Human COX-1 and Rat COX-2.

Reactivity : Reacts with U937 cell line stimulated with TPA.

Reference : 1. Oka A. *et al.* Induction of cyclo-oxygenase 2 in brains of patients with Down' s syndrome and dementia of Alzheimer type: specific localization in affected neurones and axons. *Neuroreport*. 1997 8 (5), 1161-1164.
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3. Hida T. *et al.* Increased expression of cyclooxygenase 2 occurs frequently in human lung cancers, specifically in adenocarcinomas. *Cancer Research* 1998: 58 (17), 3761-3764.
4. Uefuji K. *et al.* Expression of cyclooxygenase-2 protein in gastric adenocarcinoma. *Journal of Surgical Oncology*. 1998: 69 (3), 168-172.
5. Achiwa H. *et al.* Prognostic significance of elevated cyclooxygenase 2 expression in primary, resected lung adenocarcinomas. *Clinical Cancer Research*. 1999: 5 (5), 1001-1005.
6. Okami J. *et al.* Overexpression of cyclooxygenase-2 in carcinoma of the pancreas. *Clinical Cancer Research*. 1999: 5 (8), 2018-2024.
7. Sakuma K. *et al.* Cyclooxygenase (COX)-2 immunoreactivity and relationship to p53 and Ki-67 expression in colorectal cancer. *J Gastroenterol*. 1999: 34 (2), 189-194.

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