

## Cyclooxygenase 2 from Human, Recombinant

Cat. No. NATE-1238

Lot. No. (See product label)

## Introduction

**Description** Cyclooxygenase 2 (COX-2) catalyzes the first step in the biosynthesis of

prostaglandins (PGs), thromboxanes, and prostacyclins: The conversion fo arachidonic acid to PGH2. Discoveries of the induction of COX expression by a variety of stimuli such as phorbol esters, lipopolysaccharides, and cytokines led to the hypothesis that the inducible form of COX, COX-2, is responsible for the biosynthesis of PGs under acute inflammatory conditions. Thus, COX-2 has become

the focus of attention for the nonsteroidal anti-inflammatory drug (NSAID) development. Human recombinant COX-2 contains a six residue histidine sequence

development. Human recombinant COX-2 contains a six residue histidine sequence (His-tag) near the amino terminus. The His-tag enzyme, which has a Km value for arachidonate of 6.5  $\mu$ M, exhibits enzyme activity and sensitivity to NSAIDs similar

to the non-tagged enzyme.

**Synonyms** Cyclooxygenase 2; Inducible Cyclooxygenase Prostaglandin H Synthase 2; COX-2

## **Product Information**

**Species** Human

**Source** Sf21 cells

Molecular Weight 70 kDa

Activity >8,000 U/mg

Unit Definition One unit of enzyme consumes one nanomole of oxygen per minute at 37°C in 0.1

M Tris-HCl buffer, pH 8.0, containing 100  $\mu$ M arachidonate, 5 mM EDTA, 2 mM phenol, and 1  $\mu$ M hematin. The cyclooxygenase activity of COX-2 was measured at 37°C by monitoring oxygen consumption using a Gilson Model 5/6 H oxygraph

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equipped with a Clark oxygen electrode.

## Storage and Shipping Information

**Storage** -80°C (as supplied)

**Stability** > 6 months