Creative Enzymes®

Cyclooxygenase 2 from Ovine, Recombinant

Cat. No. NATE-1239

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 (His-tag) near the amino terminus. The His-tag enzyme, which has a Km value for arachidonate of 6.5 μM, 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	Ovine
Source	Sf21 cells
Molecular Weight	~70 kDa
Purity	>80% estimated by SDS-PAGE
Activity	>20,000 U/mg
Unit Definition	One unit is defined as the amount of enzyme required to consume 1 nmol of oxygen per minute 37°C in 100 mM Tris, pH 8.0, containing 100 μm arachidonate, 5 mM EDTA, 2 mM phenol, and 1 μM hematin.

Storage and Shipping Information

Storage	-80°C (as supplied)
Stability	> 6 months