CREATIVE BIOMART®
Assay Kit

# COX Fluorescent Activity Assay Kit

## Product Information

**Cat.No.** Kit-0253

**Product Overview**

COX Fluorescent Activity Assay provides a convenient fluorescence-based method for detecting COX-1 or COX-2 activity in both crude (cell lysates/tissue homogenates) and purified enzyme preparations. The assay utilizes the peroxidase component of COXs. In this assay, the reaction between PGG2 and ADHP (10-acetyl-3,7-dihydroxyphenoxazine) produces the highly fluorescent compound resorufin that can be analyzed using an excitation wavelength of 530-540 nm and an emission wavelength of 585-595 nm. The kit includes isozyme-specific inhibitors for distinguishing COX-2 activity from COX-1 activity.

**Description**

Cyclooxygenase (COX, also called Prostaglandin H Synthase or PGHS) is a bifunctional enzyme exhibiting both COX and peroxidase activities. The COX component converts arachidonic acid to a hydroperoxy endoperoxide (PGG2), and the peroxidase component reduces the endoperoxide to the corresponding alcohol (PGH2), the precursor of PGs, thromboxanes, and prostacyclins.It is now well established that there are two distinct isoforms of COX. COX-1 is constitutively expressed in a variety of cell types and is involved in normal cellular homeostasis. A variety of mitogenic stimuli such as phorbol esters, lipopolysaccharides, and cytokines lead to the induced expression of a second isoform of COX, COX-2. COX-2 is responsible for the biosynthesis of PGs under acute inflammatory conditions. This inducible COX-2 is believed to be the target enzyme for the anti-inflammatory activity of nonsteroidal antiinflammatory drugs.

**Usage**

Please read these instructions carefully before beginning this assay.For research use only. Not for human or diagnostic use.

**Storage**

Stability: 1 year;Storage: -80°C;This kit will perform as specified if stored as directed in the Materials Supplied section, and used before the expiration date indicated on the outside of the box.

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## Kit Components

Kit components may be stored at -80°C prior to use. After opening kit, we recommend each kit component be stored according to the temperature listed below.Assay Buffer (10X): 2 vials, -20°C;Heme: 1 vial, -80°C;COX Positive Control: 1 vial, -80°C;Arachidonic Acid (substrate): 1 vial, -20°C;Potassium Hydroxide: 1 vial, -20°C;ADHP Assay Reagent: 4 vials, -20°C;DuP-697: 1 vial, -20°C;SC-560: 1 vial, -20°C;DMSO Assay Reagent: 1 vial, Room temperature;Resorufin Standard: 100 µl, -20°C;96-Well Solid Plate (black): 2 plates, Room temperature;Plate Cover: 2 covers, Room temperature

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