

COX-2 Inhibitor Screening Kit

Product Information

Cat.No.

Kit-2152

Product Overview

COX-2 Inhibitor Screening Kit offers a rapid, simple, sensitive, and reliable test suitable for high-throughput screening of COX-2 inhibitors. The assay is based on the fluorometric detection of Prostaglandin G2, the intermediate product generated by the COX enzyme.

Size

100 assays

Description

Cyclooxygenase (COX), also known as prostaglandin-endoperoxide synthase (PTGS, EC 1.14.99.1), is an enzyme that is responsible for the formation of important biological mediators called prostanoids, including prostaglandins, prostacyclin and thromboxane. COX is the central enzyme in the biosynthetic pathway to prostanoids from arachidonic acid. There are two known isoenzymes: COX-1 and COX-2. COX-1 is constitutively expressed in many tissues and is the predominant form in gastric mucosa and in kidney. COX-2 is not expressed under normal conditions in most cells, but elevated levels are found during inflammation. Pharmacological inhibition of COX by nonsteroidal anti-inflammatory drugs (NSAID) can provide relief from the symptoms of inflammation and pain.

Applications

Screening/studying/characterizing COX-2 inhibitors.

Storage

Store kit at -20°C, protected from light. Briefly spin small vials prior to opening. Read entire protocol before performing the assay. Unless specified, bring assay components to room temperature (RT) before use. COX-2: Reconstitute with 110 µl of sterile ddH₂O. Aliquot and store at -80°C. Avoid repeated freeze/thaw. Use within two months. For short-term storage (~ 2 weeks), COX-2 can be stored at -20°C. Keep on ice while in use. It's stable for at least ~30 min. on ice. Note: we recommend not keeping the enzyme on ice for longer periods.

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Kit Components

COX Assay Buffer: 25 ml
COX Probe (in DMSO): 200 µl
COX Cofactor (in DMSO): 20 µl
Arachidonic Acid: 50 µl
NaOH: 500 µl
COX-2, Human Recombinant: 1 vial
Celecoxib, COX-2 inhibitor (in DMSO): 100 µl

Detection method Fluorescence (Ex/Em = 535/587 nm)

Features & Benefits

• Simple method to screen COX-2 inhibitors • High-throughput • Includes Inhibitor Control, Celecoxib
