abcam

Product datasheet

Cyclooxygenase 1 (COX1) Inhibitor Assay Kit (Fluorometric) ab204698

5 References 1 Image

Overview

Product name	Cyclooxygenase 1 (COX1) Inhibitor Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Inhibitor compounds
Assay type	Enzyme activity
Product overview	Cyclooxygenase 1 (COX1) Inhibitor Screening Kit (Fluorometric) (ab204698) offers a rapid, simple, sensitive, and reliable test suitable for high-throughput screening of COX-1 inhibitors. The assay is based on the fluorometric detection of Prostaglandin G2, the intermediate product generated by the COX enzyme.
Notes	This product is manufactured by BioVision, an Abcam company and was previously called K548 Cyclooxygenase-1 (COX-1) Inhibitor Screening Kit (Fluorometric). K548-100 is the same size as the 100 test size of ab204698. 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.
Platform	Microplate reader

Properties

Storage instructions	Store at -20°C. Please refer to protocols.

Components	100 tests
Arachidonic Acid	1 vial
COX Assay Buffer	1 x 25ml

Components	100 tests
COX Cofactor	1 x 20µl
COX-1 Enzyme	1 vial
NaOH Solution	1 x 500µl
OxiRed Probe	1 x 200µl
SC560 (COX-1 Inhibitor)	1 x 100µl

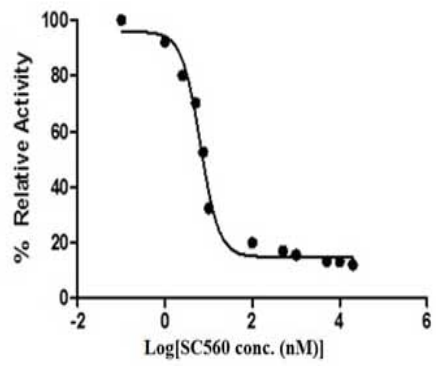
Relevance

COX proteins are membrane-associated heme proteins that have cyclooxygenase and peroxidase activities. These enzymes are targets of NSAID (nonsteroidal anti-inflammatory drugs) such as aspirin. Prostaglandins (PGs) formed by the enzymatic activity of COX-1 are primarily involved in the regulation of homeostatic functions throughout the body, whereas PGs formed by COX-2 primarily mediate pain, fever, and inflammation. COX-1 is constitutively expressed, with particularly high expression in gastrointestinal tissues. COX-2 is induced by cytokines and mitogens and is likely to play a role in inflammatory diseases such as rheumatoid arthritis. In rodents and humans, COX-3 encodes proteins with completely different amino acid sequences from COX-1 or COX-2, and without COX activity. COX-3 is thought to be a splice variant of COX-1 which retains intron one. It has been suggested that COX-3 may be the key to unlocking the mechanism of action of acetaminophen.

Cellular localization

Membrane-associated; Microsomal membrane.

Images



Cyclooxygenase 1 (COX1) Inhibitor Screening Kit (Fluorometric) (ab204698)

Inhibition of Cyclooxygenase 1 (COX1) Activity with SC560. IC_{50} of SC560 was determined to be 6.45 nM.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery

- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors