

Product datasheet

Cyclooxygenase (COX) Activity Assay Kit (Luminometric) ab139432

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Overview

Product name Cyclooxygenase (COX) Activity Assay Kit (Luminometric)

Detection method Luminescent

Precision Intra-assay

Sample	n	Mean	SD	CV%
COX	16	30U/ml		7%
COX	16	7.5U/ml		3.1%

Assay type Enzyme activity

Sensitivity 0.147 U/ml

Range 7.5 U/ml - 60 U/ml

Product overview The Cyclooxygenase (COX) Activity Assay Kit (Luminometric) (ab139432) is a non-radioactive COX activity assay. This kit allows user to easily evaluate COX I and COX II inhibitors in a convenient 96-well plate based assay with < 7% intra-assay variation.

COX Activity Assay Kit (Luminometric) uses a specific chemiluminescent substrate to detect the peroxidative activity of COX enzymes. After inhibition by NSAIDs, the direct residual activity of COX is measured by addition of a proprietary luminescent substrate and arachidonic acid. Light emission starts immediately and is directly proportional to the COX activity in the sample. The chemiluminescent signal is measured over 5 seconds.

Notes COX (cyclooxygenase, also known as Prostaglandin G/H synthase) is a membrane-bound enzyme responsible for the oxidation of arachidonic acid to Prostaglandin G₂ (PGG₂) and the subsequent reduction of PGG₂ to PGH₂. These reactions are the first steps in the formation of a variety of prostanoids.

COX has been shown to be expressed in at least two different isoforms: a constitutively expressed form, **COX1**, and an inducible form, **COX2**. COX1 is thought to regulate a number of "housekeeping" functions such as vascular hemostasis and renal blood flow. Inflammation mediators such as growth factors, cytokines and endotoxin induce COX2 expression in a number of cellular systems.

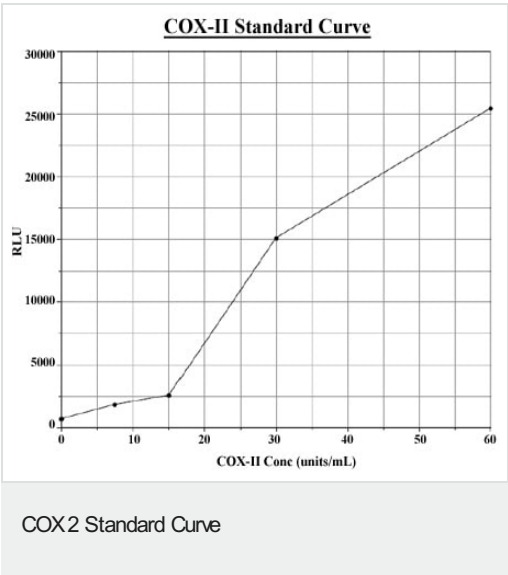
Platform Microplate reader

Properties

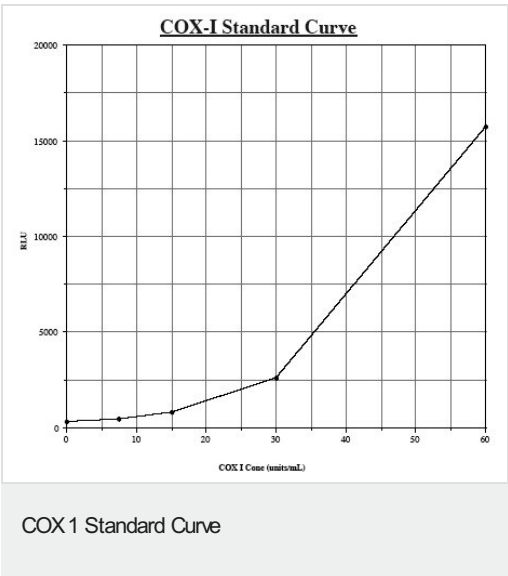
Storage instructions Please refer to protocols.

Components	
Plate Sealer	2 x unit
COX Substrate	1 x 10ml
Meloxicam, NSAID	1 x 2ml
Ibuprofen, NSAID	1 x 2ml
White 96 well microtiter plate	1 x unit

Images



Typical standard curve for COX 2 activity (in RLU) following the procedure described in the protocol for ab139432.



Typical standard curve for COX 1 activity (in RLU) following the procedure described in the protocol for ab139432.

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