Cyclooxygenase (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database

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Abstract

Prostaglandin (PG) G/H synthase, most commonly referred to as cyclooxygenase (COX, (5Z,8Z,11Z,14Z)-icosa-5,8,11,14-tetraenoate,hydrogen-donor : oxygen oxidoreductase) activity, catalyses the formation of $\text{PGG}_2$ from arachidonic acid. Hydroperoxidase activity inherent in the enzyme catalyses the formation of $\text{PGH}_2$ from $\text{PGG}_2$. COX-1 and -2 can be nonselectively inhibited by ibuprofen, ketoprofen, naproxen, indomethacin and paracetamol (acetaminophen). $\text{PGH}_2$ may then be metabolised to prostaglandins and thromboxanes by various prostaglandin synthases in an apparently tissue-dependent manner.

Contents

This is a citation summary for Cyclooxygenase in the Guide to Pharmacology database (GtoPdb). It exists purely as an adjunct to the database to facilitate the recognition of citations to and from the database by citation analyzers. Readers will almost certainly want to visit the relevant sections of the database which are given here under database links.

GtoPdb is an expert-driven guide to pharmacological targets and the substances that act on them. GtoPdb is a reference work which is most usefully represented as an on-line database. As in any publication this work should be appropriately cited, and the papers it cites should also be recognized. This document provides a citation for the relevant parts of the database, and also provides a reference list for the research cited by those parts.

Please note that the database version for the citations given in GtoPdb are to the most recent preceding version in which the family or its subfamilies and targets were substantially changed. The links below are to the current version. If you need to consult the cited version, rather than the most recent version, please contact the GtoPdb curators.

Database links

Cyclooxygenase
http://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=269

Enzymes

COX-1
http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1375

COX-2
References

2. Auerbach SS and DrugMatrix® and ToxFX® Coordinator National Toxicology Program.. National Toxicology Program: Dept of Health and Human Services.
18. Janusz JM, Young PA, Scherz MW, Enzweiler K, Wu Li, Gan L, Pikul S, McDow-Dunham KL, Johnson CR


