

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 PGG_2 from [arachidonic acid](#). Hydroperoxidase activity inherent in the enzyme catalyses the formation of PGH_2 from PGG_2 . COX-1 and -2 can be nonselectively inhibited by [ibuprofen](#), [ketoprofen](#), [naproxen](#), [indomethacin](#) and [paracetamol](#) (acetaminophen). PGH_2 may then be metabolised to prostaglandins and thromboxanes by various prostaglandin synthases in an apparently tissue-dependent manner.

Contents

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Database links

Cyclooxygenase

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

Enzymes

[COX-1](#)

<http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1375>

[COX-2](#)

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