Cytochrome P450 in GtoPdb v.2021.2

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Abstract

The cytochrome P450 enzyme superfamily (CYP), E.C. 1.14.-.-., are haem-containing monooxygenases with a vast range of both endogenous and exogenous substrates. These include sterols, fatty acids, eicosanoids, fat-soluble vitamins, hormones, pesticides and carcinogens as well as drugs. Listed below are the human enzymes, their relationship with rodent CYP enzyme activities is obscure in that the species orthologue may not metabolise the same substrates. Some of the CYP enzymes located in the liver are particularly important for drug metabolism, both hepatic and extrahepatic CYP enzymes also contribute to patho/physiological processes. Genetic variation of CYP isoforms is widespread and likely underlies a proportion of individual variation in drug disposition. The superfamily has the root symbol CYP, followed by a number to indicate the family, a capital letter for the subfamily with a numeral for the individual enzyme. Some CYP are able to metabolise multiple substrates, others are oligo- or mono- specific.

Contents

This is a citation summary for Cytochrome P450 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. For further details see [14].

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

Cytochrome P450
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=242

CYP1 family
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=261

Enzymes
CYP1A1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1318
CYP1A2
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1319
CYP1B1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1320

CYP2 family: drug metabolising subset
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=262

Enzymes
CYP2A6
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1321
CYP2A7
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1322
CYP2A13
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1323
CYP2B6
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1324
CYP2C8
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1325
CYP2C9
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1326
CYP2C18
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1327
CYP2C19
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1328
CYP2D6
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1329
CYP2E1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1330
CYP2F1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1331
CYP2J2
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1332

CYP2 family: physiological enzymes subset
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1062

Enzymes
CYP2R1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1333
CYP2S1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1334
CYP2U1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1335
CYP2W1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1336

CYP3 family
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=263

Enzymes
CYP3A4
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1337
CYP3A5
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1338
CYP3A7
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1339
CYP3A43
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1340

CYP4 family
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=264

Enzymes
CYP4A11
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1341
CYP4A22
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1342
CYP4B1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1343
CYP4F2
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1344
CYP4F3
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CYP4F8
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CYP4F11
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CYP4F12
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CYP4F22
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1349
CYP4V2
CYP5, CYP7 and CYP8 families

https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1350
CYP4X1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1351
CYP4Z1
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1352

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