

CYP2 family: physiological enzymes subset in GtoPdb v.2021.2

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Abstract

Compared to the other CYP2 family enzymes, this subset have physiological rather than drug metabolising enzyme activities.

Contents

This is a citation summary for CYP2 family: physiological enzymes subset 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 [1].

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

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>

References

1. Buneman P, Christie G, Davies JA, Dimitrellou R, Harding SD, Pawson AJ, Sharman JL and Wu Y. (2020) Why data citation isn't working, and what to do about it *Database* **2020** [PMID:32367113]
2. Cheng JB, Motola DL, Mangelsdorf DJ and Russell DW. (2003) De-orphanization of cytochrome P450 2R1: a microsomal vitamin D 25-hydroxilase. *J Biol Chem* **278**: 38084-93 [PMID:12867411]
3. Chuang SS, Helvig C, Taimi M, Ramshaw HA, Collop AH, Amad M, White JA, Petkovich M, Jones G and Korczak B. (2004) CYP2U1, a novel human thymus- and brain-specific cytochrome P450, catalyzes omega- and (omega-1)-hydroxylation of fatty acids. *J Biol Chem* **279**: 6305-14 [PMID:14660610]

4. Chung FF, Mai CW, Ng PY and Leong CO. (2016) Cytochrome P450 2W1 (CYP2W1) in Colorectal Cancers. *Curr Cancer Drug Targets* **16**: 71-8 [[PMID:26563883](#)]
5. Dhers L, Ducassou L, Boucher JL and Mansuy D. (2017) Cytochrome P450 2U1, a very peculiar member of the human P450s family. *Cell Mol Life Sci* **74**: 1859-1869 [[PMID:28083596](#)]
6. Fekry MI, Xiao Y, Berg JZ and Guengerich FP. (2019) A Role for the Orphan Human Cytochrome P450 2S1 in Polyunsaturated Fatty Acid ω -1 Hydroxylation Using an Untargeted Metabolomic Approach. *Drug Metab Dispos* **47**: 1325-1332 [[PMID:31511258](#)]
7. Pan Y and Ong EC. (2017) Cytochrome P450 2W1 (CYP2W1) - ready for use as the biomarker and drug target for cancer? *Xenobiotica* **47**: 923-932 [[PMID:27690753](#)]
8. Siller M, Goyal S, Yoshimoto FK, Xiao Y, Wei S and Guengerich FP. (2014) Oxidation of endogenous N-arachidonoylserotonin by human cytochrome P450 2U1. *J Biol Chem* **289**: 10476-87 [[PMID:24563460](#)]
9. Xu S, Ren Z, Wang Y, Ding X and Jiang Y. (2014) Preferential expression of cytochrome CYP CYP2R1 but not CYP1B1 in human cord blood hematopoietic stem and progenitor cells. *Acta Pharm Sin B* **4**: 464-9 [[PMID:26579418](#)]
10. Yan P, Eng OC and Yu CJ. (2018) A Review on the Expression and Metabolic Features of Orphan Human Cytochrome P450 2S1 (CYP2S1). *Curr Drug Metab* **19**: 917-929 [[PMID:29804525](#)]