

Class A Orphans in GtoPdb v.2025.2

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Abstract

Table 1 lists a number of putative GPCRs identified by **NC-IUPHAR [197]**, for which preliminary evidence for an endogenous ligand has been published, or for which there exists a potential link to a disease, or disorder. These GPCRs have recently been reviewed in detail [153]. The GPCRs in Table 1 are all Class A, rhodopsin-like GPCRs. Class A orphan GPCRs not listed in Table 1 are putative GPCRs with as-yet unidentified endogenous ligands.

Table 1: Class A orphan GPCRs with putative endogenous ligands

GPR3 GPR4 GPR6 GPR12 GPR15 GPR17 GPR20
GPR22 GPR26 GPR31 GPR34 GPR35 GPR37 GPR39
GPR50 GPR63 GPR65 GPR68 GPR75 GPR84 GPR87
GPR88 GPR132 GPR149 GPR161 GPR183 LGR4 LGR5
LGR6 MAS1 MRGPRD MRGPRX1 MRGPRX2 P2RY10 TAAR2

In addition the orphan receptors *GPR18*, *GPR55* and *GPR119* which are reported to respond to endogenous agents analogous to the endogenous cannabinoid ligands have been grouped together (*GPR18*, *GPR55* and *GPR119*).

Contents

This is a citation summary for Class A Orphans 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 [89].

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

Class A Orphans

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=16>

Introduction to Class A Orphans

<https://www.guidetopharmacology.org/GRAC/FamilyIntroductionForward?familyId=16>

Class A Orphans with no pharmacology

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1111>

Receptors

GPR20

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=91>

GPR21

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=92>

GPR22

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=93>

GPR26

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=96>

GPR27

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=97>

GPR45

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=106>

GPR50

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=107>

GPR62

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=111>

GPR78

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=116>

GPR79

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=117>

GPR82

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=118>

GPR135

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=129>

GPR141

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=131>

GPR148

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=134>

GPR149

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=135>

GPR150

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=136>

GPR152

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=138>

GPR153

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=139>

GPR161

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=141>

GPR176

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=637>

MRGPRE

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=153>

MRGPRG

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=155>

MRGPRX3

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=158>

Class A Orphans with only surrogate ligands

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1112>

Receptors

GPR33

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=100>

GPR52

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=108>

GPR85

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=121>

GPR88

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=123>

Class A Orphans with emerging pharmacology

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1113>

Receptors

GPR3

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=83>

GPR4

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=84>

GPR6

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=85>

GPR12

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=86>

GPR15

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=87>

GPR19

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=90>

GPR25

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=95>

GPR31

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=98>

GPR32

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=99>

GPR34

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=101>

GPR35

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=102>

GPR37

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=103>

GPR37L1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=104>

GPR39

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=105>

GPR61

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=110>

GPR63

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=112>

GPR65

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=113>

GPR68

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=114>

GPR75

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=115>

GPR83

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=119>

GPR87

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=122>

GPR101

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=125>

GPR132

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=128>

GPR139

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=130>

GPR142

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=132>

GPR146

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=133>

GPR151

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=137>

GPR160

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=140>

GPR162

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=142>

GPR171

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=143>

GPR173

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=144>

GPR174

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=145>

GPR183

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=81>

MAS1L

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=151>

MRGPRD

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=152>

MRGPRF

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=154>

MRGPRX1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=156>

MRGPRX2

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=157>

MRGPRX4

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=159>

P2RY8

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=164>

P2RY10

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=165>

GPR18, GPR55 and GPR119

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=114>

Receptors

GPR18

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=89>

GPR55

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=109>

GPR119

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=126>

GPR42, GPR84

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1115>

Receptors

GPR42

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=228>

GPR84

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=120>

LGR4, LGR5, LGR6

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1116>

Receptors

LGR4

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=147>

LGR5

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=148>

LGR6

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=149>

Mas1, BB3/brs3, GPR17

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1114>

Receptors

MAS1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=150>

BB₃ receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=40>

GPR17

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=88>

TAAR2, TAAR3, TAAR4p, TAAR5, TAAR6, TAAR8, TAAR9

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1117>

Receptors

TAAR2

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=167>

TAAR3

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=168>

TAAR4P

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=169>

TAAR5

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=170>

TAAR6

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=171>

TAAR8

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=172>

TAAR9

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=173>

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