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Receptor guanylyl cyclase (RGC) family in GtoPdb v.2025.3

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Abstract

The mammalian genome encodes seven guanylyl cyclases, GC-A to GC-G, that are homodimeric transmembrane receptors activated by a diverse range of endogenous ligands. These enzymes convert guanosine-5'-triphosphate to the intracellular second messenger cyclic guanosine-3',5'-monophosphate (cyclic GMP). GC-A, GC-B and GC-C are expressed predominantly in the cardiovascular system, skeletal system and intestinal epithelium, respectively. GC-D and GC-G are found in the olfactory neuropepithelium and Grueneberg ganglion of rodents, respectively. GC-E and GC-F are expressed in retinal photoreceptors.

Contents

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Database links

Receptor guanylyl cyclase (RGC) family
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=1022
- Transmembrane guanylyl cyclases
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  - Receptors
    - GC-A(Guanylyl cyclase-A)

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GC-B(Guanylyl cyclase-B)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1748
GC-C(Guanylyl cyclase-C)
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GC-D(Guanylyl cyclase-D)
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GC-E(Guanylyl cyclase-E)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2031
GC-F(Guanylyl cyclase-F)
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=2899
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GC-2(Guanylyl cyclase, $\alpha_2\beta_1$)
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Guanylyl cyclase α_2 subunit
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1289
Guanylyl cyclase β_1 subunit
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1290
Guanylyl cyclase β_2 subunit
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1291

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