

Acetylcholine receptors (muscarinic) in GtoPdb v.2021.3

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Abstract

Muscarinic acetylcholine receptors (mAChRs) (**nomenclature as agreed by the [NC-IUPHAR Subcommittee on Muscarinic Acetylcholine Receptors \[50\]](#)**) are activated by the endogenous agonist [acetylcholine](#). All five (M1-M5) mAChRs are ubiquitously expressed in the human body and are therefore attractive targets for many disorders. Functionally, M₁, M₃, and M₅ mAChRs preferentially couple to G_{q/11} proteins, whilst M₂ and M₄ mAChRs predominantly couple to G_{i/o} proteins. Both agonists and antagonists of mAChRs are clinically approved drugs, including [pilocarpine](#) for the treatment of elevated intra-ocular pressure and glaucoma, and [atropine](#) for the treatment of bradycardia and poisoning by muscarinic agents such as organophosphates.

Contents

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Database links

[Acetylcholine receptors \(muscarinic\)](#)

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=2>

Introduction to Acetylcholine receptors (muscarinic)

<https://www.guidetopharmacology.org/GRAC/FamilyIntroductionForward?familyId=2>

Receptors

M₁ receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=13>

M₂ receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=14>

M₃ receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=15>

M₄ receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=16>

M₅ receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=17>

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