Motilin receptor (version 2020.4) in the IUPHAR/BPS Guide to Pharmacology Database

Anthony P. Davenport¹ and Gareth Sanger²

¹ University of Cambridge, UK
² Queen Mary University of London, UK

Abstract

Motilin receptors (provisional nomenclature) are activated by motilin, a 22 amino-acid peptide derived from a precursor (MLN, P12872), which may also generate a motilin-associated peptide. Activation of these receptors by endogenous motilin released from endocrine cells within the mucosa of the duodenum during fasting, induces propulsive phase III movements, part of the gastric migrating motor complex, and promotes the sensation of hunger. Drugs and other non-peptide compounds which activate the motilin receptor may generate a more long-lasting ability to increase cholinergic activity within the upper gut, to promote gastrointestinal motility; this activity is suggested to be responsible for the gastrointestinal prokinetic effects of certain macrolide antibiotics (often called motilides; e.g. erythromycin), although for many of these molecules the evidence is sparse. Relatively high doses of these compounds may induce vomiting and in humans, nausea.

Contents

This is a citation summary for Motilin receptor 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.

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

Motilin receptor
http://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=41

Introduction to Motilin receptor
http://www.guidetopharmacology.org/GRAC/FamilyIntroductionForward?familyId=41

Receptors
motilin receptor
http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=297

References

4. Broad J and Sanger GJ. (2013) The antibiotic azithromycin is a motilin receptor agonist in human stomach:


Effect of erythromycin on ATP-induced intracellular calcium response in A549 cells. 


Sanger GJ. (2014) Ghrelin and motilin receptor agonists: time to introduce bias into drug design. 

Neurogastroenterol. Motil. 26: 149-55 [PMID:24435586] 


