

Relaxin family peptide receptors in GtoPdb v.2023.1

Alexander I. Agoulnik¹, Ross A.D. Bathgate², Thomas Dschietzig³, Andrew L. Gundlach², Michelle Halls⁴, Craig Smith⁵ and Roger Summers⁴

1. Florida International University, USA
2. University of Melbourne, Australia
3. Charité-University Medicine Berlin, Germany
4. Monash University, Australia
5. Deakin University, Australia

Abstract

Relaxin family peptide receptors (RXFP, **nomenclature as agreed by the NC-IUPHAR Subcommittee on Relaxin family peptide receptors [23, 119]**) may be divided into two pairs, RXFP1/2 and RXFP3/4. Endogenous agonists at these receptors are heterodimeric peptide hormones structurally related to insulin: [relaxin-1](#), [relaxin](#), [relaxin-3](#) (also known as INSL7), insulin-like peptide 3 ([INSL3](#)) and [INSL5](#). Species homologues of relaxin have distinct pharmacology and [relaxin](#) interacts with RXFP1, RXFP2 and RXFP3, whereas mouse and rat relaxin selectively bind to and activate RXFP1 [260]. [relaxin-3](#) is the ligand for RXFP3 but it also binds to RXFP1 and RXFP4 and has differential affinity for RXFP2 between species [259]. [INSL5](#) is the ligand for RXFP4 but is a weak antagonist of RXFP3. [relaxin](#) and [INSL3](#) have multiple complex binding interactions with RXFP1 [267] and RXFP2 [132] which direct the N-terminal LDLa modules of the receptors together with a linker domain to act as a tethered ligand to direct receptor signaling [262]. [INSL5](#) and [relaxin-3](#) interact with their receptors using distinct residues in their B-chains for binding, and activation, respectively [321, 152].

Contents

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[Relaxin family peptide receptors](#)

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=60>

Introduction to Relaxin family peptide receptors

<https://www.guidetopharmacology.org/GRAC/FamilyIntroductionForward?familyId=60>

Receptors

RXFP1

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=351>

RXFP2

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=352>

RXFP3

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=353>

RXFP4

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=354>

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