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Relaxin family peptide receptors in GtoPdb v.2025.3

Alexander I. Agoulnik[1], Ross A.D. Bathgate[2], Thomas Dschietzig[3], Andrew L. Gundlach[2], Michelle Halls[4], Craig Smith[5] and Roger J. Summers[4]

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, 125]**) 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 [268]. relaxin-3 is the ligand for RXFP3 but it also binds to RXFP1 and RXFP4 and has differential affinity for RXFP2 between species [267]. INSL5 is the ligand for RXFP4 but is a weak antagonist of RXFP3. relaxin and INSL3 have multiple complex binding interactions with RXFP1 [275] and RXFP2 [138], which together with the N-terminal linker and LDLa module drive receptor activation by an unknown mechanism [270, 89]. INSL5 and relaxin-3 interact with their receptors using distinct residues in their B-chains for binding, and activation, respectively [55, 329, 158, 56].

Contents

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