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QRFP receptor in GtoPdb v.2023.1

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Abstract

The human gene encoding the QRFP receptor (**nomenclature as agreed by the NC-IUPHAR Subcommittee on the QRFP receptor [19]**; QRFPR, formerly known as the Peptide P518 receptor), previously designated as an orphan GPCR receptor was identified in 2001 by Lee *et al.* from a hypothalamus cDNA library [17]. However, the reported cDNA (AF411117) is a chimera with bases 1-127 derived from chromosome 1 and bases 155-1368 derived from chromosome 4. When corrected, QRFPR (also referred to as SP9155 or AQ27) encodes a 431 amino acid protein that shares sequence similarities in the transmembrane spanning regions with other peptide receptors. These include neuropeptide FF2 (38%), neuropeptide Y_2 (37%) and galanin Gal_1 (35%) receptors. QRFP receptor was identified as a Gs-coupled GPCR [6, 14] that's activated by the endogenous peptides QRFP43 (43RFa) and QRFP26 (26RFa) [6, 14, 11]. However, Gq- and Gi/o-mediated signaling was also reported [11, 25]. Two naturally occurring mutations in the human QRFP receptor lead to distinct and opposite 26RFa-evoked signaling bias [20].

Contents

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