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VIP and PACAP receptors (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database

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Abstract

Vasoactive intestinal peptide (VIP) and pituitary adenylate cyclase-activating peptide (PACAP) receptors (**nomenclature as agreed by the NC-IUPHAR Subcommittee on Vasoactive Intestinal Peptide Receptors [64, 65]**) are activated by the endogenous peptides VIP, PACAP-38, PACAP-27, peptide histidine isoleucineamide (PHI), peptide histidine methionineamide (PHM) and peptide histidine valine (PHV). $VPAC_1$ and $VPAC_2$ receptors display comparable affinity for the PACAP peptides, PACAP-27 and PACAP-38, and VIP, whereas PACAP-27 and PACAP-38 are >100 fold more potent than VIP as agonists of most isoforms of the PAC_1 receptor. However, one splice variant of the human PAC_1 receptor has been reported to respond to PACAP-38, PACAP-27 and VIP with comparable affinity [29]. PG 99-465 [115] has been used as a selective $VPAC_2$ receptor antagonist in a number of physiological studies, but has been reported to have significant activity at $VPAC_1$ and PAC_1 receptors [35]. The selective PAC_1 receptor agonist maxadilan, was extracted from the salivary glands of sand flies (*Lutzomyia longipalpis*) and has no sequence homology to VIP or the PACAP peptides [116]. Two deletion variants of maxadilan, M65 [180] and Max.d.4 [117] have been reported to be PAC_1 receptor antagonists, but these peptides have not been extensively characterised.

Contents

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