NLM AIDSLINE

Pharmacological characterization of the novel helodermin/VIP receptor present in human SUP-T1 lymphoma cell membranes.

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[Acetyl-His1]VIP stimulated adenylate cyclase with higher potency than VIP in membranes from human SUP-T1 lymphoblasts and was used as an efficient radioiodinated ligand with low non-specific binding to evaluate the relationship between receptor occupancy and adenylate cyclase activation and the possible interference of peptide T (an epitope derived from HIV envelope protein gp120). Various peptides inhibited [125I-acetyl-His1]VIP binding and activated the enzyme, their order of potency being: helodermin greater than [acetyl-His1]VIP greater than VIP = PHI = [Phe1]VIP greater than [D-Phe2]VIP = [D-Ala4]VIP = [D-Phe4]PHI greater than or equal to [D-Phe4]VIP greater than [D-His1]VIP giving further support for the existence of a novel subtype of helodermin/VIP receptors. [D-Ala1]peptide T and VIP-(10-28) did not recognize the binding site and did not inhibit, even at high concentration, VIP - or VIP analogue - stimulated adenylate cyclase activities.

Adenyl Cyclase/ANTAGONISTS & INHIB/METABOLISM Binding Sites Enzyme Activation/DRUG EFFECTS Human Kinetics Lymphoma/METABOLISM Peptide T/PHARMACOLOGY Peptides/*METABOLISM/PHARMACOLOGY Receptors, Gastrointestinal Hormone/*METABOLISM Support, Non-U.S. Gov't Tumor Cells, Cultured/*METABOLISM Vasoactive Intestinal Peptide/*METABOLISM/PHARMACOLOGY JOURNAL ARTICLE