

PACAP 1-38 acetate

Chemical Properties

CAS No. :

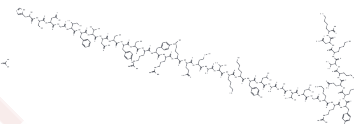
Formula: C205H334N62O56S

Molecular Weight: 4595.29

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	PACAP 1-38 acetate is a pituitary adenylate cyclase activating polypeptide (PACAP) analogue. PACAP 1-38 acetate binds to PACAP type I receptor (IC ₅₀ = 4 nM) and PACAP type II VIP2 receptor (IC ₅₀ = 1 nM) but not to PACAP type II, VIP1 receptor.
Targets (IC ₅₀)	PACAP
In vitro	The ability of neuropeptides to modulate enteric smooth muscle proliferation was examined in primary explant cultures of rabbit gastric antrum and colon smooth muscle. Cell proliferation was determined by [³ H]thymidine incorporation measurements and cell counting. PACAP 1-38 acetate concentration dependently (10 ⁻¹⁰ M to 10 ⁻⁶ M) inhibited the serum-induced [³ H]thymidine incorporation [in colon, 55.6 ± 9.3% of control with 10 ⁻⁷ M PACAP 1-38 acetate] and inhibited increase in cell numbers in cultures derived from the colon but not in those from the antrum. Effects of PACAP 1-38 acetate were mimicked by forskolin (10 ⁻⁷ to 10 ⁻⁶ M) but not by 8-bromo-cGMP. Substance P, motilin, calcitonin gene-related peptide, and somatostatin had no effect [3].
In vivo	The effect on total pulmonary resistance (R ₁) was examined for inhaled PACAP 1-38 acetate in anesthetized, ventilated guinea pigs. Two minutes after inhalation, PACAP 1-38 acetate (36 ± 6%) inhibited the increase in R ₁ (% inhibition of histamine-induced R ₁ prior to inhalation) caused by histamine i.v., whereas the vehicle (-1 ± 10%) did not. The inhaled peptides caused no sustained effects on heart rate or blood pressure. Infusion of PACAP 1-38 acetate i.v. dose-dependently inhibited the increase in R ₁ caused by inhaled histamine and by carbachol i.v. [4].

Solubility Information

Solubility	H ₂ O: 100.00 mg/mL (21.76 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.2176 mL	1.0881 mL	2.1761 mL
5 mM	0.0435 mL	0.2176 mL	0.4352 mL
10 mM	0.0218 mL	0.1088 mL	0.2176 mL
50 mM	0.0044 mL	0.0218 mL	0.0435 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Werling D, et al. Passage through the Ocular Barriers and Beneficial Effects in Retinal Ischemia of Topical Application of PACAP (1-38) in Rodents. *Int J Mol Sci.* 2017 Mar 21;18(3). pii: E675.
- Gourlet P, et al. Fragments of pituitary adenylate cyclase activating polypeptide discriminate between type I and II recombinant receptors. *Eur J Pharmacol.* 1995 Dec 4;287(1):7-11.
- van Assche G, et al. Region-specific antiproliferative effect of VIP and PACAP-(1-38) on rabbit enteric smooth muscle. *Am J Physiol.* 1999 Jan;276(1):G303-10.
- Lindén A, et al. PACAP 1-38 as an inhaled bronchodilator in guinea pigs in vivo. *Peptides.* 1998;19(1):93-8.

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