



LKT Laboratories, Inc.

Pituitary Adenylate Cyclase-activating Peptide (6-38),
human/sheep/rat

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Product Information

Product ID P0008

CAS No. 137061-48-4

Chemical Name

Synonym PACAP

Formula $C_{182}H_{300}N_{56}O_{45}S$

Formula Wt. 4024.8

Melting Point

Purity $\geq 95\%$

Solubility Soluble in water (0.9
mg/mL).

Store Temp $-20^{\circ}C$

Ship Temp Ambient

Description

Pituitary adenylate cyclase-activating polypeptide (PACAP) is an endogenous peptide that stimulates cAMP production in the anterior pituitary. PACAP and PACAP-related peptide (PRP) regulate immune function and display increases in expression when hosts are challenged with bacterial pathogens. PACAP and PRP also control expression of reproductive hormones such as follicle-stimulating hormone (FSH) and luteinizing hormone (LH). Additionally, PACAP and PRP bind the PAC1 receptor and VPAC1/2 receptors. PACAP itself inhibits K^{+} amplitude of delayed rectifier K^{+} channels, exhibiting anti-apoptotic activity in cerebellar granule cells.

Phe-Thr-Asp-Ser-Tyr-Ser-Arg-
Tyr-Arg-Lys-Gln-Met-Ala-Val-
Lys-Lys-Tyr-Leu-Ala-Ala-Val-
Leu-Gly-Lys-Arg-Tyr-Lys-Gln-
Arg-Val-Lys-Asn-Lys-NH₂

Bulk quantities available upon request

Product ID	Size
P0008	0.5 mg
P0008	1 mg
P0008	2.5 mg

References

Nam BH, Moon JY, Kim YO, et al. Structural and functional characterization of pituitary adenylyl cyclase-activating polypeptide (PACAP)/PACAP-related peptide (PRP) and its receptor in olive flounder (*Paralichthys olivaceus*). *Comp Biochem Physiol B Biochem Mol Biol.* 2013 Jan;164(1):18-28. PMID: 23026070.

Tam JK, Lee LT, Cheng CH, et al. Discovery of a new reproductive hormone in teleosts: pituitary adenylate cyclase-activating polypeptide-related peptide (PRP). *Gen Comp Endocrinol.* 2011 Sep 15;173(3):405-10. PMID: 21703272.

Vaudry D, Falluel-Morel A, Bourgault S, et al. Pituitary adenylate cyclase-activating polypeptide and its receptors: 20 years after the discovery. *Pharmacol Rev.* 2009 Sep;61(3):283-357. PMID: 19805477.

Mei YA, Vaudry D, Basille M, et al. PACAP inhibits delayed rectifier potassium current via a cAMP/PKA transduction pathway: evidence for the involvement of I_k in the anti-apoptotic action of PACAP. *Eur J Neurosci.* 2004 Mar;19(6):1446-58. PMID: 15066141.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.