Product Data Sheet

Product Name: PACAP (1-27), human, ovine, rat TFA
Cat. No.: GC38596

Chemical Properties

Cas. No.			
Formula	$C_{144}H_{225}F_3N_{40}O_{41}S$	M.Wt	3261.68
Solubility	Water: 100 mg/mL (30.66 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

PACAP (1-27), human, ovine, rat TFA (PACAP 1-27 TFA) is the N-terminal fragment of PACAP-38, and is a potent PACAP receptor antagonist with IC50s of 3 nM, 2 nM and 5 nM for rat PAC1, rat VPAC1 and human VPAC2, respectively[1].

Radioligand receptor binding assays with I-monoiodinated PACAP (1-27), human, ovine, rat confirms the presence of PAC -receptors on AR4-2J cells, since PACAP (1-27), human, ovine, rat and PACAP(1-38) equipotently displaces radioligand binding with a Kd of 1-2 nM, whereas vasoactive intestinal peptide (VIP) is 1000-fold less potent. PACAP (1-27), human, ovine, rat exhibits a distinct and much higher susceptibility to VIP-amino acid substitutions. PACAP (1-27), human, ovine, rat has potency and binding affinity to stimulate IP3 and cAMP formation in AR4-2J cells[2].

The inhibitory effect of pituitary adenylate cyclase activating polypeptide (PACAP (1-27), human, ovine, rat) on the increase in total pulmonary resistance (RL) causes either by allergen or histamine in anaesthetized, ventilated guinea-pigs is studied. PACAP (1-27), human, ovine, rat given via i.v. infusion (0.045-4.5 nmol/kg/min) dose-dependently reduces the increase in RL caused by inhaled ovalbumin and histamine. At the highest dose, PACAP (1-27), human, ovine, rat prevents the increase in RL caused by ovalbumin

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

and histamine completely. Infusion of PACAP (1-27), human, ovine, rat and the β2-adrenoceptor agonist, salbutamol (0.045-4.5 nmol/kg/min) inhibit the increase in RL similarly, but salbutamol increases the heart rate more than PACAP (1-27), human, ovine, rat[3].

[1]. 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. [2]. SchÄfer H, et al. Structural motifs of pituitary adenylate cyclase-activating polypeptide (PACAP) defining PAC1-receptor selectivity. Regul Pept. 1999 Feb 5;79(2-3):83-92. [3]. LindÉn A, et al. Inhibition of bronchoconstriction by pituitary adenylate cyclase activating polypeptide (PACAP 1-27) in guinea-pigs in vivo. Br J Pharmacol. 1995 Jul;115(6):913-6.