

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

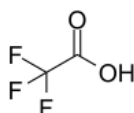
Solubility Water: 100 mg/mL (30.66 mM) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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

HSDGIFTDSYSRYRKQMAVKKYLA AVL-NH₂



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 K_d of 1-2 nM, whereas vasoactive intestinal peptide (VIP) is 1000-fold less potent. PACAP (1-27), human, ovine, rat exhibits a distinct

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

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) caused 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 and histamine completely. Infusion of PACAP (1-27), human, ovine, rat and the β 2-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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA