PRODUCT INFORMATION

PACAP (1-38) (human, mouse, ovine, porcine, rat) (trifluoroacetate salt)

Item No. 24770

Formal Name: L-histidyl-L-seryl-L-α-aspartylglycyl-L-isoleucyl-L-phenylalanyl-L-threonyl-L-α-aspartyl-L-seryl-L-tyrosyl-L-seryl-L-arginyl-L-tyrosyl-L-arginyl-L-lysyl-L-glutaminyl-L-methionyl-L-alanyl-L-valyl-L-lysyl-L-lysyl-L-tyrosyl-L-leucyl-L-alanyl-L-alanyl-L-valyl-L-leucylglycyl-L-lysyl-L-arginyl-L-tyrosyl-L-lysyl-L-glutaminyl-L-arginyl-L-valyl-L-lysyl-L-asparaginyl-L-lysinamide, trifluoroacetate salt

Synonym: Pituitary Adenylate Cyclase-activating Peptide (1-38)

MF: $C_{203}H_{331}N_{63}O_{53}S \bullet XCF_3COOH$

FW: 4,534.3

Purity: ≥95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥4 years

H—His—Ser—Asp—Gly—Ile—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—NH_2
• XCF_3COOH

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pituitary adenylate cyclase-activating peptide (PACAP) (1-38) (human, mouse, ovine, porcine, rat) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the PACAP (1-38) (human, mouse, ovine, porcine, rat) (trifluoroacetate salt) in water. The solubility of PACAP (1-38) (human, mouse, ovine, porcine, rat) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PACAP (1-38) is a PACAP receptor agonist with IC_{50} values of 4, 2, and 1 nM, respectively, for rat PAC_1, rat $VPAC_1$, and human $VPAC_2$ recombinant receptors expressed in CHO cells.[1] It binds to PACAP receptors in rat brain membrane (IC_{50} = 4.45 nM) and to SH-SY5Y and SK-N-MC human neuroblastoma and T47D human breast cancer cells (IC_{50}s = 3.6, 13, and 4.7 nM, respectively).[2,3] It also stimulates cAMP accumulation in H-SY5Y, SK-N-MC, and T47D cells (EC_{50}s = 0.37, 0.26, and 0.73 nM, respectively).[3] *In vivo*, in newborn pigs, PACAP (1-38) (1 µM) induces vasodilation of pial arterioles by 43%.[4]

References

1. Gourlet, P., Vandermeers, A., Vandermeers-Piret, M.-C., *et al.* Fragments of pituitary adenylate cyclase activating polypeptide discriminate between type I and II recombinant receptors. *Eur. J. Pharmacol.* **287(1)**, 7-11 (1995).
2. Moro, O., Wakita, K., Ohnuma, M., *et al.* Functional characterization of structural alterations in the sequence of the vasodilatory peptide maxadilan yields a pituitary adenylate cyclase-activating peptide type 1 receptor-specific antagonist. *J. Biol. Chem.* **274(33)**, 23103-23110 (1999).
3. Eggenberger, M., Born, W., Zimmermann, U., *et al.* Maxadilan interacts with receptors for pituitary adenylyl cyclase activating peptide in human SH-SY5Y and SK-N-MC neuroblastoma cells. *Neuropeptides* **33(2)**, 107-114 (1999).
4. Lenti, L., Domoki, F., Kis, D., *et al.* Pituitary adenylate cyclase-activating polypeptide induces pial arteriolar vasodilation through cyclooxygenase-dependent and independent mechanisms in newborn pigs. *Brain Res.* **1165**, 81-88 (2007).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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